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THE ADIRONDACK WILDERNESS.

The eminent New York banker and practical philanthropist, Morris K. Jesup, whose name will always be revered by friends of forest protection everywhere, on account of the active interest taken by him in the subject, as intanced by his munificient donation to the Museum of Natural History of New York of the finest collection of specimens of forest trees to be found anywhere, obtained through the agency of Professor Sargent from every state in the union, at an expense of over $100,000, has added another obligation to the many due him by getting the Chamber of Commerce of New York to memorialize the state on the subject of preserving the remaining forests in the Adirondack wilderness.

The memorial presented by Mr. Jesup, after a very able speech on the subject, was couched in the following words :—

"The Chamber of Commerce of the State of New York is alarmed at the dangers which threaten the water supply of the rivers in the northern part of the state through the destruction of the forests which protect their sources.

The Chambers believe that the preservation of these forests is necessary to maintain an abundant and constant flow of water in the Hudson, the Mohawk and other important streams, and that their destruction will seriously injure the internal commerce of the state. As long as this forest region remains in the possession of private individuals its protection from fire and lumbering operations will be impossible. Believing, then, that this matter is one of very great importance and that the necessity exists for immediate legislative action, we humbly pray your honorable body to adopt such measures as will enable the state to acquire the whole territory popularly known as the Adirondack Wilderness and hold it forever as a forest reserve.

This memorial was adopted without a dissenting voice, and the Chamber also unanimously authorized the chair to appoint a committee of seven, with power to invite the co-operation of other associations and individuals throughout the state, to secure the necessary legislation. President Geo. W. Lane named the following committee :—Messrs. Morris K. Jesup, Samuel D. Babcock, D. Willis James, Charles S, Smith, C. N. Bliss, Solon Humphreys and Thomas B. Coddington.—*Montreal Gazette.*

INTER-PROVINCIAL TRADE.

It is gratifying to note the steady and rapid growth of inter-Provincial trade in Canada. There is probably no section of this wide Dominion that has not experienced a great change in this respect within the past few years. Nowhere, however, is the change more apparent than along the great inter-provincial highway known as the Intercolonial Railway. The amount of the products of the manufacturing establishments of the Maritime Provinces passing over the Intercolonial for Quebec, Ontario, and points further west has grown to large dimensions, and this is, perhaps, the most gratifying feature of trade that presents itself just now. The market for probably more than half of the products of the six cotton mills now running in New Brunswick and Nova Scotia is found in the Upper Provinces and the West, and the same may be said of our sugar refineries. Nor are these industries altogether exceptional; for we find that the products of the lock factory at Moncton, the hat factory at Truro, the skate factories, the nail works and the starch factories all find a ready market in the West, and in the aggregate the benefits derived are not inconsiderable. The same is true of the coal industry. The sales of the Nova Scotia mines in Quebec and Ontario have wonderfully increased within the past few years. Almost any day there may be seen in the Moncton station yard evidences of the extensive nature of this traffic, the manufacturing establishments and the railways of both Quebec and Ontario being large buyers.—*Moncton, N. B., Times.*

CANADA AND THE FORESTRY EXHIBITION.

The correspondence of the Toronto *Globe* writes from London, England :—In an unostentatious way much is being done now to promote the success of the International Forestry Exhibition to be held at Edinburgh next year. Although the promoters of the scheme do not possess the financial and influential support which was extended to the council of the Fisheries Exhibition, they are nevertheless well backed up, and are setting to work with the determination to make the venture a complete success. There is every prospect, I believe, of the co-operation of two or three of the Colonial Governments being secured, and if present promises are fulfilled, a comprehensive and thoroughly representative show will probably be got together. As regards Canada, I hear that in addition to whatever exhibits may be sent by the Dominion Government, there is a great probability of a novel Canadian feature being introduced by the Canadian Pacific authorities here. It has been proposed to the exhibition Council by Mr. Begg, of the C. P. R., that space outside the exhibition buildings should be allotted for a model farm, which he is willing to arrange, to be called the Canadian or Manitoba farm, and intended while illustrating practically every branch of trade springing out of the forest industries, to show also to those who are contemplating emigration the mode of life it will be necessary to adopt when establishing themselves in their new homes. Among the prominent features would be a small ready-made, wooden house, such as settlers can purchase for erection on their farms in the North-West, a small stable built of logs, showing this mode of housing cattle. The house itself would be furnished with chairs, tables, and all articles of wooden manufacture, such as barrels, bowls, tubs, brooms, etc., that are used by settlers. With these will also be displayed samples of roots, grains, vegetables, and other products of the Northwest. In the stable would be placed some prairie hay and specimens of oats and barley. The space occupied by the farm itself would be divided off by the different kinds of fencing used in the Northwest, and in the parts thus enclosed would be shown a breaking plough and agricultural implements in which wood plays a principal part. In the shed it is also proposed to place specimens of the different kinds of lumber obtained from the North West, and the woods grown on the prairie, as used for fuel, etc. Possibly, too, some illustration will also be given of tent life, during the settler's first two or three months on the prairie. I believe the exhibition authorities are not yet able to intimate the amount of space they may be in a position to set apart for this purpose. But assuming that this preliminary difficulty is got over, there is every likelihood of the exhibit being satisfactorily arranged, and if so, it will prove undoubtedly the most novel and poplar feature of the exhibition. No doubt Mr. Begg, if he carries out his plan, will be glad to receive the hearty co-operation of those in Canada to whom the matter may be of special interest.

THE TALLEST TREES IN THE WORLD.

It is usually considered that this epithet belongs, *par excellence*, to the famous big trees in California, variously known by the names of Wellington or Sequoia. These are, however, far surpassed in height, and probably also in the total amount of timber in a single tree, by the real giants of the vegetable kingdom, the noble gum trees of the genus *Eucalyptus*, which grow in the Virginia State Forest, on the slopes of the mountains dividing Gipps Land from the rest of the colony of Victoria, and also in the mountain ranges north of Cape Otway, the first land which is usually made by any vessel bound from England to Melbourne direct. As will presently be shown, there are only four of the California trees known to be above 300 feet high, the tallest being 325 feet, and only about sixty have been measured that exceed 200 feet in height.

In the large tracts near the sources of the Watta River, however, (a northern branch of Yarra-yarra, at the mouth of which Melbourne is built), all the trees average from 250 to 300 feet in height, mostly straight as an arrow, and with very few branches. Many fallen trees measure 350 feet in length, and one huge specimen was discovered lately which was found, by actual measurement with a tape, to be 435 feet long from its roots to where the trunk had been broken off by the fall; and at that point it was three feet in diameter, so that the entire tree could not have been less than 500 feet in total height. It was 18 feet in diameter at five feet from the ground, and was a Eucalyptus of either of the species *E. obliqua* or *E. amygdalina*. It should be noted that these gigantic trees do not, like their California prototypes, grow in small and isolated groves, towering above smaller specimens of the same or of closely allied kinds, but that, both in the Dandenong and Otway ranges, nearly every tree in th forest, over a large area, is on this enormou scale.—*World of Wonders.*

TRANSPLANTING TREES.

A writer in *Farm and Fireside*, in his directions respecting the treatment of trees before their removal, states as follows :—

"A tree in full leaf may be compared to a powerful pump, the roots absorbing water from the soil, which is carried upward through the stem and exhaled from the leaves in the form of vapor. This exhalation from the leaves is really the primary operation, however, being simply a process of evaporation. If, now, the principal portions of the roots be cut away, and especially the fine rootlets which are farthest from the stem, and through whose extremities nearly all the water is absorbed, the leaves, if allowed to grow, will exhaust the water from the stem and roots more rapidly than it can be supplied by the remnant of the latter, and the consequence will be the destruction of the tree. Hence, in transplanting trees, the leaf bearing twigs should be cut away in proportion to the loss of roots, and it should be remembered that the root surface is generally equal to that of the twigs; consequently the safest rule is to remove nearly all the branches, trimming to bare poles. It is hard to do this, but the aftergrowth of the tree will be enough more rapid to compensate the apparent loss. In moving large trees it is an excellent plan to dig down and cut off a large portion of the roots a year before transplanting, removing a portion of the top at the same time. This will cause the formation of new rootlets near the stem, which may be preserved in the final transplanting."

FROM different points on the St. John river, Mr. A. B. Spence, of this town, has shipped to Boston during the present season 50,000 cedar railway ties, the production of which, in the northern counties, is becoming an industry of considerable importance. From St. John, Moncton and Hillsboro, he has shipped 40,000 hacmatac ties to Philadelphia. On the Pennsylvania roads few ties of any other description are used. Mr. Spence has brought to St. Stephen three cargoes of ship knees, and a considerable quantity by railway, which are here planed and held for orders.—*St. Stephen, N. B., Courier.*

FINNISH TIMBER RAFTS.

In an account of a trip from St. Petersburg to the interior of Finland, Prof. John Croumbie Brown, author of "Forest Lands of Finland," makes mention of two immense timber rafts he met in his trip. He says :

A little below Nyslot we met two Finnish timber rafts containing each, it was estimated by a Finnish gentleman, about 5,000 logs; and above Nyslot other two containing according to the estimates of a Finnish engineer engaged extensively in the manufacture of machinery for saw mills and other purposes in Nyslot, 10,000 logs each. I have called these *Finnish* timber rafts. The movement of all the Finnish timber rafts seen by me on the Saima See was affected by a boat carrying out an anchor to a considerable distance ahead, and the raft being warpt thither by a windlass on the raft, to which motion was given by a horse on board. The men had on board a fire for cooking, and a small hut for shelter.

In regard to the form of the raft which is known in Northern Russia, if not also here, as the *koshell*, M. Judrae, a distinguished member of the Imperial Forest Service in Russia, gives the following information :

Up to 1860, logs designed for floatage on the lake were generally made up into rafts at considerable expense: but in 1861, a peasant, a native of Finland, devised the system of floatage in the so-called *koshell*. These *koshells* are of two kinds, designed respectively for transit by lake and by sea. The former are of a less complicated structure than the latter. The lake *koshell* consists of two parts, a head and a body. The head is a simple raft of logs of ordinary size one row deep. On this the navigators take their places, and sometimes horses, together with a windlass or other machinery for which an anchor is attached. The head is formed of logs arranged lengthwise in a regular row, the number varying with the intended size of the *koshell*. It goes foremost, and on it the moving person operates. To the left side of the head there is attached a string of logs, joined end to end, where they are hewn thin, and through a hole about an inch in diameter they are tied together with twigs twisted like a rope, each end of this being twisted or tied up into a knot not likely to slip. One log is thus added to another, until a sufficient length has been prepared. When the last is attached to the right side of the head and there is formed an extensive loop or circle of connected logs—a chain, of which these are the links. This is called the body of the *koshell*, and into the interior of this circle are tumbled, without any determined order, the logs which are to be floated away. Into these lake *koshells* there are put from 4,000 to 8,000 or 10,000 logs ; and sometimes, as a prevention against rupture in a storm, there is superadded to the encompassing chain of logs a thick rope.

'The sea *koshell* differs somewhat from the *lake koshell*. The head consists not of one layer, but of several layers of logs, either laid in alternate directions, or, if all be in one direction, bound very firmly by cross logs. Short logs are generally employed, the so-called seven *archine* logs, about 16 feet log. What is of first importance in these is their power of resistance, as they are frequently subjected to the strain of severe storms, and in view of this the logs in the body of the *koshell* are all laid in regular rows. The first row following the head may consist of 45 logs, the second of 50, the third of 60, and so on, increasing till the row in the middle of the body may consist of 150 logs, after which the number in each successive row diminishes till the body presents the outline of a lengthened ellipse. Besides this, in several places the ends of the body are connected by means of logs fastened across them, so as to keep the *koshell* more compact, *Koshells* formed thus can withstand very severe storms. They may contain from 1,200 to 3,000 logs, but not more.

Such *koshells* are generally towed by steamers ; and to show how much cheaper the floatage of timber by *koshells* than the floatage by rafts or single logs, and how much the first proprietor or the merchant gains in profit from this contrivance of the Finnish peasant, though it is not very easy to do so completely I may state the following particulars : In the floating of timber on the Mat Kosero by the old system, the log of timber costs about five kopsecs ; now, by floating it in these *koshells* it costs about one and one half kopec, or less than one-third of the former cost. The bringing of timber to the Koumsa saw mill, in consequence of this new method of floatage, costs for each log, about thirty kopecs less than it did formerly. If we assume that the transport of each log to the saw mills in the Government of Olonetz costs, upon an average, ten kopecs less than it used to do ; and if we take 237,000—the number of logs cut up by these saw mills in 1865—as the average annual number, then it will be apparent that the saving of expense will be 23,700 roubles, or £2,370 per annum. Such results have followed this so-called trifling contrivance. The name of the peasant has not been made famous ; but it is said that he is now a very rich man, and the other peasants 'speak of him as a very knowing one.'

EDINBURGH FORESTRY EXHIBITION.

We have been favored by Mr. G. Cadell, of 3 George IV Bridge, Edinburgh, Secretary of the International Forestry Exhibition to be held at Edinburgh in 1884, the following documents in connection with that event :

CLASSIFICATION.

CLASS I.—PRACTICAL FORESTRY.

Sec. 1. Implements and tools used in forestry. Draining, enclosing, and surveying instruments, chains dendrometers, etc.

Sec. 2. Models of foresters' huts, drying sheds, charcoal kilns, timber slips, sluices, bridges, and weirs.

Sec. 3. Plans of embankments, rafts, and appliances for floating timber.

Sec. 4. Machinery or models for transporting timber and transplanting trees.

Sec. 5. Saw mills—woodworking machinery of every description, and pulping apparatus, in motion or otherwise.

Sec. 6. Fencing materials of all kinds including gates and stiles.

CLASS II.—FOREST PRODUCE, RAW AND MANUFACTUED.

Sec. 1. Collections of timber specimens and ornamental woods ; *a.* indigenous or naturalized ; *b.* exotic.

Sec. 2. Woods used for ordnance—as gun carriages, etc.

Sec. 3. Woods used for railway purposes—natural or prepared.

Sec. 4. Wood pavements.

Sec. 5. Cooperage—tubs, barrels, etc.

Sec. 6. Wood carving and turnery, with tools used.

Sec. 7. Basket and wicker work.

Sec. 8. Fancy woodwork, including veneers, parquetery, bog oak articles, stained and colored woods, etc.

Sec. 9. Wood engraving, with samples of wood.

Sec. 10. Bamboos, canes, reeds, and manufactures therefrom.

Sec. 11. Tanning substances—barks, extracts, etc.

Sec. 12. Dyeing substances—woods, roots, flowers, etc.

Sec. 13. Barks, including cork.

Sec. 14. Fibres and Fibrous substances.

Sec, 15. Materials for paper manufacture.

Sec. 16. Gums, resins, and gum elastics.

Sec. 17. Wood oils and varnishes—including lac of sorts.

Sec. 18. Drugs, foods, spices.

Sec. 19. Charcoal for gunpowder, tinder, etc.

Sec. 20. Peas and its products.

Sec. 22. Cones, seeds, and fruits of trees and shrubs.

CLASS III.—SCIENTIFIC FORESTY.

Sec. 1, Botanical specimens of forest flora.

Sec. 2. Microscope sections of woods.

Sec. 3. Parasites—fungi and lichens injurious to trees.

Sec. 4. Edible fungi—in their natural state or preserved.

Sec. 5. Forest fauna injurious to woods,

Sec. 6. Forest Entomology.—Useful and noxious insects, with specimens illustrative of the damage done by the latter.

Sec. 7. Preservative processes applied to timber.

Sec. 8. Specimens and diagrams illustrating the geographical formations adapted to the growth of trees.

Sec. 9. Fossil plants—collections illustrative of the trees of coal measures, etc.

Sec. 10. Trees found in bogs—oak, fir, etc.

CLASS IV.—ORNAMENTAL FORESTRY.

Sec. 1. Growing specimens of rare and ornamental trees and shurbs—in tubs or otherwise.

Sec. 2. Rustic work—arbours, bridges, gates, seats, etc.

Sec. 3. Dried specimens of ornamental objects, including foliage, &c.

CLASS V.—ILLUSTRATIONS OF FORESTRY.

Sec. 1. Paintings, photographs and drawings of remarkable or historical trees, foliage and scenery.

Sec. 2. Delineations of trees in their native countries, or of recent introduction.

Sec. 3. Illustrations showing effects of blight, accident, parasitic growths, or any abnormal condition.

Sec. 4. Sketches of practical work and opertions in the forests.

N. B.—[Special attention is invited to this class.

CLASS VI.—FOREST LITERATURE AND HISTORY,

Sec. 1. Reports of Forest Schools or Departments—forest periodicals and othe publications manuals and almanacs,—treatises on measuring and valuing woods,—forest floras of different countries,—on fixation of dunes, and on ancient or extinct forests.

Sec. 2. (*a.*) Working plans of forests and plantations, valuations and surveys of estates, etc. (*b.*) Charts illustrative of the geographical distribution of forest trees and their altitude. (*c.*) Maps illustrating the distribution of forest produce, forming articles of British commerce. (*d.*) Forest book-keeping and accounts.

N. B.—[Special attention is invited to section 2.

CLASS VII.—ESSAYS AND REPORTS,

Essays and reports on specific subjects, for which premiums are offered as per separate schedule.

CLASS VIII.—LOAN COLLECTIONS.

Collections within the scope of the foregoing classes—for example, illustrating the fauna, flora, or forest produce of a province or district—would be acceptable.

CLASS IX.

Economic condition of foresters and woodmen.

CLASS X.—MISCELLANEOUS.

Articles not particularised in the above divisions, if bearing on the objects of the exhibition, are admissible, with the sanction of the Executive Committee.

N. B.—[Exhibitors in making their entries must quote the class and section in this column.]

REGULATIONS.

1. The exhibition is intended to include every thing connected with, or illustrative of, the forest products of the world, and will be open to exhibitors from all countries.

2. Entries close on the first of March 1884. All exhibits must be intimated by a certificate of entry, forms of which will be issued on application to the secretary.

3. The committee reserve power to restrict the space applied for, or to decline any application, in either of which cases the secretary will, as soon as practicable, notify the same to the applicant.

4. Exhibitor will be charged one shilling per square foot of floor space. Open air space free. Cases for exhibits must not exceed ten feet in height.

5. Exhibitors must pay all expense of transit, delivery, fixing, and removing their exhibits.

6. All packages containing articles intended for exhibition must bear the distinctive mark I. F. E. EDINBURGH, in red paint ; and they must also have painted on them, the name and number (which will be sent on allocation of space) of the exhibitor. The way-bill must accompany all packages, and contain the name of the exhibitor. his number and address.

7. Arrangements will be made by the committee for the reception of exhibits, at a date to be afterwards fixed.

8. The committee will not be liable for any loss or damage, from whatever cause, which exhibits may sustain in transit, at the exhibition or otherwise.

9. Exhibitors must provide, either personally or by their agent, for the reception, setting up, and removal of their exhibits, and the verification of the same ; in default whereof, the committee reserve the right of doing whatever they may consider necessary at the expense of the exhibitor.

10. Exhibitors of machinery requiring the use of water, gas or steam, must state, on making their entries, the quantity of water, gas, or steam which will be required. Exhibitors of machinery in motion must state the rate of speed at which it is to be driven. The furnishing of all connections, shafting, pulleys, belting, etc., must be at the expense of the exhibitor. Gas, water, or steam power will be supplied on terms to be hereafter arranged by the committee, and be under their entire control.

11. Medals, money prizes, and diplomas for exhibits and essays, will be awarded by competent jurors.

12. No photographs, copies, or other reproductions of any objects exhibited, will be permitted to be taken without the consent of the committee and the exhibitor.

13. Contributors to the loan department are requested to communicate with the secretary, who will supply special forms to be filled up by them. Free space will be given for workmen's approved models.

14. No exhibitor will be allowed to tranfer any allotment, or to allow any other than his own duly admitted exhibits to be placed thereon, except by permission of the committee.

15. No articles can be removed before the close of the exhibition, unless perishable, regarding which special arrangements will be made.

16. To ensure uniformity of decoration and general effect, no exhibitor will be allowed to put up any sign, flag, banner, or any other kind of decoration or erection, without the approval of the committee.

17. Exhibitors will be required to provide all necessary attendance, and to keep their stands and exhibits properly cleaned, and in good order, during the whole period of the exhibition.

18. Exhibitors may mark the selling price of articles exhibited complete, for the information of the jurors and visitors.

19. No placards will be permitted either within the exhibition or on the enclosure except by special permission of the committee. No handbills, newspapers, books, etc., are allowed to be sold in the exhibition without their sanction.

20. All fulminating and explosive substances, and all dangerous materials, are absolutely forbidden to be sent.

21. All cases must be unpacked as soon as received, and the empty cases taken away by the exhibitors or their agents.

22. The committee reserve the sole right of compiling and publishing a catalogue of exhibits, which can be purchased only within the exhibition.

23. Smoking is strictly prohibited within the exhibition buildings.

24. All persons admitted to the exhibition shall be subject to the rules and orders of the committee.

G. CADELL, Secretary,
3 George IV Bridge, Edinburgh.
26th September 1883.

NOTE.—The committee will endeavor to obtain from the various British railway companies special terms for the conveyance of exhibits to and from the exhibition, and should they succeed, such arrangements will be duly intimated to exhibitors. The committee, however, do not undertake any responsibility between the railway companies and exhibitors with reference to the despatch, transmission, delivery, or return of exhibits.

Official London Agent—WILLIAM H. RIDER, Esq., 14 Bartholomew Close, E.C.

A PARALYTIC STROKE—W. H. Howard, of Geneva, N.Y., suffered with palsy and general debility, and spent a small fortune in advertised remedies, without avail, until he tried Burdock Blood Bitters. It purified and revitalized the blood, caused it to circulate freely, and quickly restored him to health.

ONE HALF A MILLION OF DOLLARS FOR POSTAGE.

George Stinson & Co., the celebrated Art Publishers, of Portland, Maine, undoubtedly pay more money for postage than any other firm in the world ; for the last five years their postage bill has averaged over two thousand dollars per week, making a grand aggregate of over five hundred and twenty thousand dollars ; this is about the three-hundredth part of all postage of every description collected by the United States government during that time, and in this connection it must be borne in mind that the country now has over fifty million souls, and fifty thousand post-offices. But the enormous sum paid for postage represents only the cost of sending the light packages, letters and circulars, for large, heavy packages are sent by express and freight. Messrs. Stinson & Co. publish every description of pictures of the better class, and their trade now extends over the entire world. As an illustration of the fact that their trade reaches the furthermost parts of the earth, the following may be interesting : A short time since an order for an assortment of over three thousand large and expensive pictures was received from Tasmania, away down under the South Pole. Not many years ago Tasmania was a penal colony of England, and its population was entirely of convicts and their keepers. Since the removal of the convicts, it has become a thrifty colony ; this place is so remote, that three months are required for an answer to a letter. Tons of pictures are sent to South Africa by Messrs. Stinson & Co., and West Africa sends to Portland for Works of Art ; they have trade in every quarter of the globe where civilization has gained a foothold. Commencing at the bottom, they have worked their way to the top, step by step, and thereby, added to the greatest push and enterprise, they have that solid, practical experience that is always necessary to the best results, in all things. They carry in stock millions of pictures, and are at a moment's notice ready to fill a five cent order, or one for thousands of dollars ; they employ some five hundred artists, clerks, and workmen ; their machinery and appointments are on a magnificent scale, and a trade of ten thousand dollars a day, on an average, is required to keep them moving in full blast. Their assortment of steel plates is especially fine, and ranks very high in artistic merit ; many thousands of dollars are often spent on a single plate. They appreciate the value of printer's ink, and know how to use it to the best advantage ; therefore they advertise largely and liberally in the newspapers—newspaper advertising was an important factor in laying the sound foundations of their great success, and without it, they state that it would have been utterly impossible for them to have reached their present position. Stinson & Co. are a striking illustration of what can be accomplished by energy, industry, and good judgment. There is "room at the top"—all honor to those who fight their way up. This firm believes in standard goods and low prices, and on that principle their business is conducted. American homes should be made beautiful by refined and meritorious works of Art ; no one has any excuse for not adding to their homes the charms of pictures, for fine works of high art are within the reach of all.

A Sawing Match Arranged.

LONDON, Ont., Dec. 27.—Messrs. J. D. McColl and S. Happer, of Parkhill, have accepted the challange of R. S. Darby and R. Brown, of Bluevale, to match them in sawing. They will "saw" Messrs. Darby and Brown for $200 a side at Parkhill on 1st February, 1884. They would prefer the log to be 22 inches in diameter, or two cuts of a 20-inch maple log, but will leave that matter for their opponents to decide.

Sanitary.

An English engineer has provided Wanamaker's great Philadelphia store with a pair of huge mechanical lungs, which draw in the outside air, cool it with showers of spray, and distribute it through thousands of orifices in the building, to the comfort of clerks and visitors.

An excellent authority in medicine recommends a little common sugar as a remedy for a dry, hacking cough, and gives scientific reasons for it. If troubled at night or on first waking in the morning, have a little cup on a stand close by the bed, and take half a teaspoonful ; this will be of benefit when cough syrups fail.

The vapor bath is a thorough cleanser of the skin, because it softens the surface so entirely that all foreign and effete matter can be rubbed off with the hand. It is a favourite remedy in domestic medicine as well as with the profession. There is no reason why the vapor bath should be an unusual luxury in this country. In England at several large factories the waste steam and hot water are diverted into rooms where the employees can have vapor and water baths in the evening. A small sum is charged for soap, towels, and the services of a bath-keeper. Well disposed owners of great manufacturing works in this country might greatly promote the comfort and health of their people by employing similar means. The cost of fitting up such bathing-rooms would be small, and the two sexes could use them on alternate evenings.

Dr. Henry Macaulay, M. D., of Belfast, has recently made a suggestion which, if followed in tropical countries, will turn the tables on the sun with a vengeance. He suggests that Mouchot's sun engine should be used to pump cold air into dwellings, factories, etc., pointing out that the temperature can in this way be reduced from 100° or more to 60°. He points out that not only will this reduce the temperature especially at night, thus rendering sleep possible, but fresh air will be guaranteed during the day, and the plague of flies and insects would be excluded. The weak point about this arrange ment is that it requires ice. We think, however, adds *Nature*, that sooner or later in America, where the heat in summer is more distressing than in any other part of the world, and ice is everywhere, this arrangement, or one like it, is certain to be adopted.

Wonderful Sunsets.

Mr. Norman Lockyer, the eminent English astronomer, has been explaining the causes of the glorious sunsets which have recently delighted the inhabitants of the Old, and to a less extent, the New, World. During August and September remarkable phenomena were noticed at sunrise and sunset from East India to Brazil ; and lately the same appearanees in a modified form have been apparent in Europe. Wonderful blues and greens and crimsons have dyed the skies at dawn and evening, which, in the latter part of August, were so deep as to pale the sun's light most noticeably. The source of these strange appearances has been traced to a mass of minute floating particles of pumice stone ejected from the volcano of Krakatoa in the Straits of Sunda. Tremendous volcanic action, all will remember, took place during the days of the 26th-28th of August, accompanied by earthquakes and marine commotions. To the fine dust then thrown out and carried by atmospherical currents over Southern India, the Mauritins, the Cape, Gold Coast, Brazil and Europe, these appearances are due.

Professor Brooks, of Western New York, noticed towards the end of last month shortly after sunset, "a red light, intensely bright, almost dazzing, reaching nearly to the zenith, a phenomenon visible over a large part of the North-Western States." Doubtless this was also due to a part of that fine Java dust having been wafted to these north-westerly regions. Prof. Brooks, however, ascribes it to a "shower of teleoscopic meteors." Mr. Lockyer's theory is, we think, infinitely more plausible. Many will remember a somewhat similar appearance of the sky in Canada some two years ago after a prolonged period of drought, when bush fires were raging in all directions, due, doubtless to vast quantities of microscopic floating wood ashes.

IF you are troubled with a "hacking cough," Down's Elixir will give you relief at once. Warranted as recommended, or money refunded. Price 25c, 50c, and $1.00 per bottle.

BE CAREFUL WHAT YOU EAT—The best medical authorities declare that worms in the human system are often induced by eating too freely of uncooked fruit and too much meat, cheese, etc. Whatever may be the cause, Freeman's Worm Powders are speedy and safe to cure ; they destroy the worms, and contain their own chathartic to expel them.

National Manufacturing Co.

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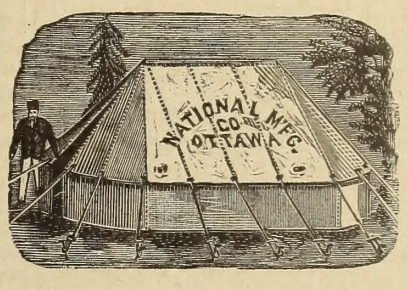
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OUR LUMBER INTERESTS.

The seventh of the course of lectures on Canadian Industries and Commerce, under the auspices of the Montreal Young Men's Christian Association, was delivered in the Association Hall on Monday evening, December the 10th, by Mr. J. K. Ward, the subject being "The Lumber industry of the Dominion," The chair was occupied by Mr. William Little, who, in the course of a few introductory remarks, referred to the fact that there were few, if any, men in Canada more competent to deliver a lecture on the subject of lumber interests than the gentleman who was about to adress them.

Mr. J. K. Ward then proceeded to deliver his lecture as follows:—

Mr. Chairman, Ladies and gentlemen—In coming before you on this occasion in the role of a lecturer, I do so with a good deal of diffidence, not because the subject on which I intend to speak is void of either interest or importance, but on account of my inability to treat it as it merits. However this may be I claim your indulgence, should I fail to make it as interesting and as useful as I would wish it to be. I have heard it said that long dull sermons have their uses as they sometimes call into exercise the virtue of patience. I trust, however, that none of you will be put to such a test to-night. I will therefore proceed with my paper on the Lumber Industry of the Dominion in the following order:—First, the quantity of lumber manufactured, and the extent of territory on which it is made, and from whence our future supply is to be derived; secondly, the importance of this trade in a commercial and economic point of view; next, some points in its history, and a short notice of some of those men who have taken a prominent part in developing the trade; and lastly, a few remarks of a personal nature, intended for the younger portion of my hearers should time and circumstances permit. It is estimated from statistics derived from Government returns and other sources that I have had access to, as well as having some personal knowledge of the business, that there is manufactured annually in the Dominion, east of the Rocky Mountains, lumber and timber approximating to 2,600,000,000 feet board measure—comprised of hewn timber and sawn lumber, railroad ties, cedar, round and flatted timber. The quantities quoted do not agree with those furnished by the census of 1881, being less. Take British Columbia; it is credited with producing 24,043,877 cubic feet of white and red pine in addition to 3,291,143 saw logs—at an average of say 150 feet each making nearly 500 million feet B. M., besides 86,000 cords of lath and firewood. The quantity of hewn timber is almost double that made last year in the older provinces, and one-fourth as many logs; that is certainly a large yield to be produced in a province credited with a population of less than 50,000 souls, the two districts of Yale and New Westminster, with a population of 25,000, producing nearly the whole of this large quantity of timber and logs. The total value of her forest exports was only $362,871, or a small portion of the value of the timber and lumber placed to her credit in the census. I have divided the whole product of the provinces as follows:—Ontario furnishes 4,474,000 pieces, equal to 2,600,000 standard pine logs of 200 feet each, producing 520,000,000 feet of lumber, 6,790,000 cubic feet of white and red pine, or 81,000,000 feet B. M.; dimension timber 23,000,000 feet B. M., hardwood, cedar, &c., equal to 5,000,000 feet, making in the aggregate 635,500,000 feet B. M., paying to the Provincial Government for timber dues $701,000, and ground rents, &c., $46,000, with eighteen thousand square miles under license. Quebec has under license, 48,000 square miles, producing 82,500,000 pine logs, equal to 386,000,000 feet B. M., and 1,308,000 spruce logs, producing 106,000,000 B M., white and red pine timber 3,110,000 cubic feet equal to 37,320,000 feet B. M., hardwood 51,000 cubic feet, or 611,000 feet B. M., railroad ties 143,000 pieces, 32 feet each, making 4,576,000 feet B. M., cedar equal to 4,500,000 feet, pine and spruce round timber 5,760,000 feet B. M., tamarac 175,000 feet B. M., hemlock 34,000 feet, cordwood equal to 5,000,000 feet, making in all 540,976,000 feet, giving a gross revenue of $668,596 to the province. New Brunswick cut on Government lands equal to 160,000,000 feet of all classes, principally spruce. The pine in this province, once so famed, is almost exhausted. There being a large extent of private lands in this province, I think it is safe to estimate that there is not less than 500,000,000 feet of lumber and timber produced, considerably more than three-fourths of which is exported, the balance being for home use. The extent of territory is 17,500,000 acres, 10,000,000 of which is granted and located, leaving 7½ millions still vacant, and giving to the province a revenue of $152,000 for timber dues, ground rent, etc. Nova Scotia is estimated to produce about 250,000,000 feet, of which about $1,500,000 worth is exported, this province furnishing a large quantity of birch and maple. Manitoba and North-West Territories produce say 75,000,000 feet. These figures give us a total of 2,010,476,000 feet. The difference between this total and 2,600,000,000 feet is made up by the product of private lands, principally in New Brunswick and Eastern Townships of Quebec, and including also the output of scores, if not hundreds, of small mills scattered through the country, known only in their own localities. Of the total there is about three-fifths exported, realizing $24,000,000. I think there is hardly any person at all familiar with the businesss, who will admit that there is much forest product taken out of private lands as off the public domain. Yet we are led to believe by the census that there is in the aggregate three or four times as much. This may appear strange, but when we get into the region of thousands of millions, it may not be wondered at if people add to or take off a cypher or two occasionally. I find by one of our trade reports the estimate made of the output of timber is 83,800,000 logs. Now, the product of this quantity of logs at the moderate average of 125 feet, would make four times the quantity of lumber and timber made in the four provinces. The reports of the Crown Lands departments, the exports and quantity per head of population as compared with other countries will, I think, be a very fair guide to go by.

As to the extent of territory on which these lumber operations are carried on there are in the three provinces of Quebec, New Brunswick and Ontario 75,500 square miles under license, besides about seven thousand square miles owned by private parties in these three provinces and Nova Scotia, the whole being equal to 52,800,000 acres. This, however, is not all the timber territory from which we have to draw our future supplies. The older provinces of the Dominion embrace an area of about 360,000 square miles, which, after deducting the territory from which we have to drawn our future supplies. The older provinces of the Dominion embrace an area of about 360,000 square miles, which, after deducting the territory under license, leaves an area of 270,000 square miles, or 180,000,000 acres. Only a small proportion comparatively of this is occupied for agricultural purposes, thus leaving a very large extent of territory on which, no doubt, there are vast quantities of timber, not only for export, but for home purposes. I have no doubt whatever that more than half of the whole of this territory is unfit for settlement, and will remain for ages as bush land. This bush land, in a sanitary point of view, will be useful in attracting the rains, holding back the water in its natural beds, so preventing sudden rises and falls in the rivers, which often cause much damage by overflowing lands as well as loss by excessive drought, so that many streams that once afforded good water powers are now useless as such. The Province of Quebec in particular is highly favored by its numerous streams and magnificent lakes, many of which are turned to good account by lumbermen, who often build dams at the outlets of the lakes, thus creating great reservoirs of water which are held in reserve to be used when the streams get low, enabling the drivers to get down their logs and timber perhaps the first year, whereas, if the drive depended on the natural flow of water, it might not reach its destination in less than two or three years, entailing much loss of interest on capital as well as depreciation in the value of the logs or timber by their becoming sap-stained or worm-easten. For the system of dam building, making side quays, blasting boulders and introducing improved driving tools, such as the steel cant dogs, patent pick and pointed barge, we are indebted to the Maine lumbermen, daring and profane, if you will; many of whom found watery graves in St. Maurice and other rivers. Before their advent into our country what was known as rear limits, though ever so well timbered, were considered of little value, but by the adoption of the improvements referred to these limits became almost as valuable as those fronting the Maine river. Notwithstanding the great praise due to these men they tried to introduce methods of lumbering found to be not suitable to this country or profitable to themselves, such as hauling out the whole tree to the bank of the river and there cutting it into logs, in place of having done so in the woods, and thereby often saving the cost of hauling worthless timber; also introducing oxen on a large scale for hauling long distances, where horses from their speed would prove more profitable. The use of horses for lumbering purposes instead of oxen is now almost universal. I have heard it said that an ox team and men started for the Tuque from Three Rivers with a load of provisions, oats, &c., and had to stop on the way, having run short of supplies, and were compelled to send back for a fresh stock to enable them to reach their destination. In coming back to the question of the extent of timbered territory, from which we are glad to draw out future supplies of merchantable lumber, you can hardly meet with two lumbermen who will correspond in their opinions. It is extremely problematical as to the average quantity of lumber which a given acre will yield. I have seen five, ten or even twenty thousand feet come off an acre; and have heard of as much as fifty thousand; but this I consider as very rare. It has been estimated that our timber territory in Ontario and Quebec would yield from one to two thousand feet per acre, which I consider not an unreasonable estimate. It would therefore be fair to adopt the medium estimate of fifteen hundred feet per acre, which would give, at the present rate of production, a thirty seven years' supply. This in addition to a very large extent of territory not under license, would, it is reasonable to suppose yield enough to make fifty years' supply, as stated in my paper read before the Forestry Congress. This calculation refers exclusively to pine; spruce and hard woods, in which our country abounds, that have been comparatively neglected, will as pine grows scarce become more used for finishing purposes, As years pass by and the timber increases in size, the territory cut over by the lumbermen who in the past took nothing but the choicest, will be found to contain a large quantity of material that will be considered valuable. As to providing against loss by forest fires, we may reasonably hope that they will be less frequent than in the past, and that the naturul increase in size will, as some argue make, make up for the loss occasioned by them. It may seem strange that to produce the annual output of wood goods, supposing the annual yield per acre to be 1,500 feet, that it requires 1,700,000 acres to be gone over, or equal to an area of sixteen times that of the Island of Montreal. Timber limits are sold in Quebec by auction or at private sale at so much per square mile. Licenses have to be renewed annually, and the license holder pays an annual ground rent of two dollars per mile. He pays four cents per cubic foot for oak and walnut, two cents for pine, twenty-two cents for pine log of thirteen feet long and of seventeen inches and up in diameter; eleven cents per log for those of less diameters, and five and one-half cents per piece for spruce logs. Pine trees under twelve inches in diameter are prohibited from being cut, also all hemlock and ash. The regulations are somewhat similar in Ontario, only pine and other saw logs are charged so much per thousand feet, board measure. In New Brunswick timber berths rarely bring over the upset price of $8 per mile, and there is no charge for the cut or stumpage of timber, but the revenue is put on in the shape of an export duty, which simplifies collection. In Nova Scotia there are no rules under which licenses can issue. To procure a right to the timber the land itself has to be purchased from the crown. The Quebec Government receives on an average $11.50 per square mile per annum for all territory under license. The Upper Ottawa yields $18.50 per square mile, the Lower Ottawa $10, and the St. Maurice only $4. Ontario receives annually about $25 per square mile for territory under license. The Federal Government own extensive and costly works on various rivers in Quebec and Ontario to facilitate the descent of timber and logs. The works are to be found in the Saguenay district, St Maurice, Ottawa, Gatineau, Madawaska, Coulonge, Petewawa, Dumoine, and Trent. They embrace 5,071 feet of canals, 22,063 feet of slides, 112,579 feet of booms, 2,440 feet of bridges, 21,402 feet of dams, 346 bulkheads, and 274 piers, most of which involve a large annual outlay for repairs. The tolls collected on these works go to the public works of the Dominion. Before closing this part of my subject, I would refer to that portion of my paper mentioned in which I remarked that to the unitiated travelling through the woods, he would hardly know that the shanty men had been there, except for seeing an occasional stump or few chips, or the top of a tree. This may require a little explanation. In my experience of nearly forty years' lumbering, it has been my fortune to work mostly in what is called a hard wood country, where the best pine is usually found in very scattered quantitie; but where, in a few cases, I have worked in what is known as a green country, where pine mostly prevails, it has generally proved so faulty that but a small proportion of the whole was considered as merchantable, so that the country, to a casual observer, looking from a distance, appears to be covered with timber. It is a matter of congratulation that, through the efforts of the Forestry Congress, held in this city in August, 1882, the attention of our provincial governments has been aroused to the necessity of legislative action for the preservation of our forests, and that they have taken some steps for the prevention of forest fires and for the detection of those who carelessly or wilfully destroy that which is the principal source of revenue to our province, as well as affording the greatest amount of labor to the industrial classes, likewise the setting apart as timber reserves those portions of our territory not suitable or profitable for agricultural purposes. Objections have been raised by some, who contend that lumbermen carry on their operations over a too extensive territory, and that they should be constrained to cut clean as they go. I think that every lumberman who understands his business will recognize this as the right policy, but the law, as it stood up to 1868, actually offered a premium to license-holders to extend their operation over all their limits by compelling them to cut a certain number of logs on each limit held by them. Failing to do so, the rental doubled on all unworked limits until it reached a maximum. However, in 1868, the government adopted a wiser policy by establishiug a fixed rental on all licenses, whether worked or not, thus inducing lumbermen to concentrate their operation and thereby lessening the cost of lumber and obviating the necessity for making additional roads, clearing streams, building shanties and numerous drives. Too much credit cannot be given to the present Commissioner of Crown Lands for the Province of Quebec, the Hon. W. W. Lynch, for his hearty co-operation with public sentiment, and his enlightened policy in the management of the Crown Lands, and also to the Hon. Mr. Joly, legislator and lumberman, for his efforts in calling the attention of the Government and people to the necessity of taking active measures to protect the source of so great an industry. It is to be regretted that in the last report of the Surveyor General of New Brunswick for 1882, no steps are recommended to be taken for the prevention of forest fires and the enforcement of all possible means for the protection of the source of one of her principal items of provincial revenue. Otherwise the land policy of New Brunswick is fair to the settler, and affords all necessary protection to the Government, inasmuch as the Governor-in-Council has the right to set off and have surveyed such lands as are fit for settlement, and reserved for actual settlers in lots of 100 acres each; such settlers must be eighteen years of age, or over, and not possessed of any real estate or land acquired

under the provisions of the Provincial Land Act. This I think is wise, as it prevents any one person from monopolising large tracts of public lands through the use of minors' or others' names. Neither can the settler in any way alienate land allotted to him until settlement duties are performed, the price paid in full, and the patent in his possession. Prince Edward Island does not produce more lumber than is required for home uses.

The importance of this industry may be measured to some extent by the value of our exports, which for the past year has amounted to about $24,000,000, a sum largely in excess of any manufacturing industry in the country. In addition to this there is a large quantity of lumber used in the Dominion, about two-fifths of the whole. If we compare the value of our lumber exports with that of exports from fisheries, mines and agricultural products, it amounts to one-fourth of the total value. The amount of capital invested in timbered lands and mill property is at least $35,000,000, and the value of the output is $38,000,000, and that annually invested in working capital is about $20,000,000. Fifty per cent. of the whole products of the forests represents labor, and thirty-five per cent. stumpage, ground rents, interest on mill property, cost of limits and working capital. There are employed in producing this lumber about 13,000 men during the winter in the woods; 15,000 during the summer in the mills, and over five thousand employed in loading and manning the craft that conveys it to market. These 33,000 men, the greater proportion of whom have families, represent a large population. When we take into consideration the indirect benefits derived from this industry, such as the construction of mills, machinery, barges and steamboats for its manufacture and and conveyance to market, add to this the benefit derived from the great number of ships and other crafts which take away our lumber product, we may well conclude that it is hard to over-estimate its importance, in addition to the home demand created for farm products, generally at better prices than could be obtained elsewhere, It behoves the parties on whom these vast interests depend, to preserve well our forests, as these are the well-spring of them all.

Before closing this part of my subject I would mention that Quebec, for the past ten years, has loaded on an average 620 vessels, representing 800 tons each, and carrying about 400 million feet B. M. of lumber and timber, or say one-sixth as much as was received in Chicago last year; as much more was shipped in the other parts of the Dominion on sea-going crafts. It is reported that Burstall & Co. sent a cargo of shipbuilding timber the past season to Norway, notwithstanding this country and Sweden with a timber producing territory not larger in extent than that under license in Canada, (although S. and N. contain 290,000 square miles), exports more of forest products than does the Dominion. Montreal exported in 1882, by steamship principally, 88,000,000 feet of 3 inch deals to Europe, and 22,000,000 feet of boards and planks to South America. The business of this port is steadily increasing, and no doubt will for years on account of sawn lumber taking the place of square timber for exportation, which, no doubt, is a step in the right direction, as it saves much waste in the wood as well as costly freight on nearly worthless wood contained in the centre of nearly every piece of square timber and slabs, as well as keeping much labor in the country, such as sawing, piling, &c. I might safely say that the lumber trade is with us from the cradle to the grave. There are over forty industries in the Dominion in which timber alone is employed. We find it in the stately three-master that sails the ocean, down to the tiny match with which you light your lamps. It is, indeed, impossible to enumerate all the industries into which wood enters as part of their products, so I may here close this second part of my subject. As to the history of lumber business in the Dominion, I might say that up to the close of the last century little was done beyond providing for local wants. I find that the first timber exported from Canada was sent to Larochelle in France as early as 1667 by Talon. Lieutenant Hocquart shipped some timber and boards to Rocheforte in 1735. Philemon Wright, who came from Woburn, Mass., in 1796, was one of the first, if not the first, lumberman, who took timber down the Ottawa. He settled at Hull in 1797, deciding to make his home in Canada. He was accompanied from Woburn, Mass., in February, 1800, by five families, and had in his train fourteen horses, eight oxen, and seven sleighs. He brought his first square timber to Quebec in 1807. He built the first timber slide on the Hull side of the river in 1829; was elected to represent the County of Ottawa in 1830, and died in 1839, and was buried in the little cemetery on the Aylmer road. It must have been a fine sight to an enthusiastic lumberman to look upon such magnificient forests of pine as once stood in the township of Hull. A grandson Mr. Wright stated to me in coming down the Ottawa years ago, that he thought no township on the Ottawa contained as much and as fine timber as did Hull. The first mill at the Chaudiere was built by Philemon Wright on the Hull side of the river in 1808. It was unfortunately burned down, but was rebuilt in sixty days. About 18 years prior to this the first saw mill on the Ottawa was built at Point Fortune by a Mr. Storey. It had one upright saw, and it is recorded that when the man in charge gigged back the carriage for a fresh cut he would seat himself on the log and eat his dinner, and usually go through by the time the saw was through the log. N. H. Treadwell, another American, father of the late sheriff of L'Orignal, built the first saw mill at Hawkesbury, which was carried away by the high water, when a Mr. Meers built another mill and afterwards sold it to the late George Hamilton, father of the present proprietor of the extensive mills at Hawkesbury. Among those who have taken a prominent part in developing the lumber trade of the Ottawa may be named Mr. Hamilton above referred to and the late Mr. Lowe, who managed the business for many years, and who, it is said, was so methodical that for 30 years he never missed ringing the bell at five o'clock in the morning during the sawing season. For many years this concern has done the largest business of any in the country, under the name of Hamilton Bros. The late John Egan, who might with propriety be called a lumber king, also took a prominent part, He owned enough of very valuable territory, had he survived to manage it, to have made him one of the richest men in the country. After John Egan I would mention the late Mr. McLachlan, of Arnprior, and the present extensive proprietors of mills at Ottawa city, many of whom manufacture, each, fifty million feet B. M. per annum. The difference in the production of these, compared with little mill of Mr. Wright in 1808, is truly marvellous. It is pleasing to note the harmony that exists in the present day among workmen of different nationalities, compared with the bloodshed and murder that prevailed when the Shiners of little Bytown held sway.

Coming to the St. Maurice, a river next in size to the Ottawa, of the tributaries of the St. Lawrence, the first of which I have any knowledge, was Thomas Webster from Vermont, who took timber down that river about the year 1830. He was followed by the late Angus McDonald, of Beaconcour, Edward Graves, of Three Rivers, Baptist & Gordons, Norcrass, Philips & Co. (myself), and the American Lumber Company, who have been succeeded by the present firm of Ross, Ritchie & Co. The first trade in sawed lumber with South America, with the exception of two small parcels shipped in 1838 and 1841 from Quebec, included in general cargoes made up for the River Platte, really commenced in Three Rivers in 1864, and shipped by myself, consigned to Hall & Co., of Buenos Ayres, on account of A. & S. E. Spring, of Portland, Me. Similar shipments were continued for many years to Callis, on the West Coast, and sugar box shooks, & Co., to the West Indies. The trade to South America from Montreal commenced in 1866 and has continued since with varied success. Descending to the Lower St. Lawrence we come in contact with names famous for founding the timber trade of that region, and who in our future history will rank with the Molsons, Torrances, Armstrongs, and the late George Brush, in promoting steamboat enterprise, as developers of the resources of our country, such as the late William Price and his sons, who were said to have owned at one time from sixteen to twenty sawmill establishments, on the Sagueny, the north and south shores of the St. Lawrence, and on the Batiscan, the late Sir John Caldwell, who founded the mills of Etchemin, River du Loup en bas, and Grand Falls, in New Brunswick; the late Peter Patterson, of the mammoth establishment at Montmerency, a Yorkshireman, a ship carpenter by trade, who had been in Russia and gained some experience there, was met in England by a Mr. Osborne, who built the first large mill at Montmorency, but having experienced much trouble from ice, induced Mr. P. to come to Canada, where he settled and became proprietor of the largest establishment of the kind in the country, capable, it is said, of sawing eighty millions a year, and which manufactured the first deals for the English market. Not to forget on our way back westward the Gilmours on the Gatineau and Trent, with Rathbun, of Mill Point or Deseronto. Among the great manufacturers of New Brunswick, I might mention Alexander Gibson of Fredericton, who is said to manufacture some ninety million feet a year, as well as Mr, Snowball, of Miramichi.

The average annual shipments of lumber and timber for the last ten years from the port Quebec was about 400,000,000 feet B. M., carried by 620 vessels. Before closing this part of my subject I will take occasion to say that the young men of our country, either French or English origin, are usually expert in the handling of an axe, or the management of a canoe or driving boat. It may appear almost beyond belief that some of the portages on the St. Maurice before the existence of roads, when provisions and materials had to be transported by canoe, carried on their backs, secured by tump line, equal to 250 pounds, consisting of half a barrel of pork and a bag of flour over such a portage as that of the Shawenigan and on some special occasions when put on their mettle some men by name of Belmere, of Le Gres, portaged as much as 500 pounds each, and I have it from reliable authority that one Louis Decoteau carried as much as 700 pounds on the same portage, but the effort broke him down, as he had to be brought home in a canoe; he recovered sufficiently to do ordinary work, and years after went with others on an exploratative expedition for me, on the Vermillion, he had an epileptic fit resulting in the burning of his feet in the fire, before which they were lying, as to incapacitate him for much more labor, and finally becoming insane was taken to Beauport, where he died. I refer to this man more particularly as a fine type of a voyageur, combining the suavity of the Frenchman, and a little of the African, making him one of the best cooks and attendants for a hunting party, with whom he was a great favorite, being well known to many English and French gentlemen who have hunted on the St. Maurice and Sagueny. In my experience of thirty-four years lumbering, I have heard stories of very big trees. The largest it has been my lot to have seen, grew on the River Blanche, a tributary of the Masquinonge. It measured forty inches in diameter seventy-five feet from the ground; it made five logs producing 6,000 feet B. M., when sawed. Well do I remember helping to roll the logs into the river, where they floated almost like empty puncheons, half out of the water a sure indication of superior wood in a pine log. In those days we did not take many logs with knots, so that perhaps two or three common logs were left in the woods to rot. Some of the poets have sung of the glories of the oak as the king of the forest, but to a true lumberman there is nothing that can compare to such a tree as the one I have referred to, towering toward the sky 150 feet. There is a majesty about its straight, well-proportioned stem and bushy top, that must force conviction on any person who has had the good fortune to have seen such a tree, that there is nothing to equal it among the products of the forest. It is said of the Chinese, who you all know are a sensible, practical people, that they classify the different callings and they have their status in the social scale accordingly, as follows:—The farmer first, as he produces most; the mechanic second, as he takes a natural product, such as a piece of wood and turns it into a chair or [illegible] article, thereby adding to its value; the merchant comes last, as he only passes produce from the producer to the consumer, adding nothing to value, and making the world no richer. I think they have no lumbermen in China or they would place him at the head of the list, as he makes a thing worth a dollar represent two by his labor and capital; the product of the farmer being mostly enhanced by the action of soil and air, while the lumberman's material is increased in value by the action of labor. An account of the lumber trade in Canada would be incomplete without some reference to our late frend, Mr. William Little, who might be called the pioneer lumberman of Western Canada. His operation beginning on the Grand River in 1833, or just half a century ago, afterwards extended over nearly the whole of the Niagara peninsula. It sounds strange to-day to hear of Canadian pine lumber being a novelty in the Albany market, and yet Mr. Little could speak of encountering the same difficulties in introducing the choice white pine of the Grand River into the American markets that the Ottawa lumbermen did into the British markets, the Americans objecting to its [illegible] quality now considered one of its most valuable characteristics. And as showing the changes taking place during the business life of an individual he could speak of shipping single cargoes of pine not exceeding 100 thousand feet to overstock the markets of Cleveland and Toledo, whereas these cities now find sale annually for about 200 and 300 millions respectively, while Chicago, not then in existence, finds markets for over 2,600 millions, or about as much as the entire sawn product of pine of the whole Dominion. Seeing during his business life such extraordinary changes in the consumption of lumber, it was hardly to be wondered that Mr. Little should in his declining years become, as we all knew him, one of the most ardent advocates of forest protection.

After serving an apprenticeship of five years, learning the trade of joiner and carpenter in the Isle of Man (the Ellan Vannin of the Manx), my native place, so that I am a British subject by inheritance, and a Canadian by choice (some contend that there is more merit in choosing to do well than to do so when there is no option in the matter, and the contrary when we decide to do wrong), I emigrated to America when still young. I landed in New York in 1842, almost forty-two years ago, after a passage of fifty-three days, with just half a dollar in my pocket. After paying a few necessary expenses, and after spending a day there in a vain attempt to find employment, I worked my way up the Hudson in the steamboat Swallow, which was afterwards lost in a snow storm near Athens, thirty miles below Albany, in March 1845. I found employment at my trade, longing sadly for my old home and friends, but determined to propitiate that fickle dame Fortune, with strong hopes, yet anxious to pry into the unknown and untried future, I, too some extent succeeded in getting into her favor, so that after some years of hard work, patient industry, aiming to do right, following almost any sort of employment, always keeping in view that I had my trade to fall back upon, but often in those hard times I had to turn my attention to other work, and in the coarse of events got down to driving a horse to unload canal boats; afterwards got the rank of captain of one the Hudson River barges, with a crew, all told, of two, which included myself and a young Scotchman. Well do I remember the night, dark and at midnight, when in New York Bay we came very nearly being capsized, had our deck-load not rolled off (it was beer in barrels); perhaps some might not consider it a great loss, may be less than if it had been the speculator. Had it been the latter, you might have had from another something better than you have been treated to to-night. Boating having become unprofitable, or unsuitable, I tried my hand at candle making and soap boiling, having acquired some experience in this line with my first employer who followed this business in Albany, and for whom I superintended the building of two houses. After trying for nearly a year along with another, to make this a success, I abandoned it, as my partner imbibed too freely. That is the rock on which too

many wreck their hopes. One day he allowed the soap to boil over; much of the contents ran into the drain, which was fully as bad as if the fat went into the fire. I then concluded it was best to dissolve, which I did by selling out. I fell back on my trade again. You can gather from this the advantage of having a trade; it is equal to fortune and often better, as it cannot be dissipated as long as you have health and strength. It need not prevent boys from getting a good education, one that will fit them to mix in any society or to fill any position in business, and giving them great advantages in the event of becoming employers of labor. Mr. Ward then gave some particulars of his lumbering experience, and concluded:—If what I have said will aid or encourage any young man who may be listening to me, to take heart and never be weary of trying, I would say try; there is nothing like trying, even though he be without friends, with only half a dollar to commence with. Remember that—

"Honour or fame from no condition rise,
Act well your part, there all the honour lies."

At the conclusion, a hearty vote of thanks was passed to Mr. Ward for his interesting and valuable lecture.—*Montreal Gazette.*

INDIA RUBBER MANUFACTURES.

One of the features of every exhibition in the Dominion for years past, has been the display of clothing, utensils, and other goods manufactured by the Gutta Percha and Rubber Manufacturing Company, of which Mr. T. McIlroy, jr., is the manager; and great is the surprise expressed as the visitor observes the numerous and varied uses to which the enterprising firm has put the plastic juice of the rubber plant. But whilst the ingenious adaptations of rubber to domestic and artistic purposes chiefly attract the eye of the casual visitor, the merchant and scientist most admire the more useful, if plainer, section of the exhibit—the broad machine belting, tubing and fire-hose which have made for the firm its world-wide reputation. The latter class of goods, embracing among other brands the celebrated Maltese Cross fire engine hose, has been tested in every conceivable way, and has invariably come out of the trying ordeal with added laurels. Mr. McIlroy's firm are the happy possessors of the only gold medal ever given in Canada for fire-hose, which was awarded at the great International Firemen's tournament held at London, Ont., in August last. The success met with in Canada has led the company to commence the erection of a new factory at Parkdals, the cost of which, including plant and machinery, will reach $250,000.—*Toronto News.*

Forestry Commission.

The Boston *Herald* is of the opinion that the establishment by congress of a commission of forestry would be a wise measure, if it could be made up of men who know something on the subject—of whom the number is so limited that selection would not be difficult—to consider the whole subject of forest conservation and report what should be done. If, as the *Herald* suggests, we could have at the head of such a commission such a man as Professor Charles A. Sargent, of the Arnold Arboretum, assisted by that Intelligent arboriculturist, Charles A. Dana, editor of the New York *Sun*, and others whose studies have been in this direction, we should be sure of a report of great value, and so ably presented that even the average congressman might be stirred to action for the preservation of our forests.—*Lumberman's Gazette.*

A Timber Find.

The St. Croix *Courier* has the following:—Edward Jack, Esq., has been exploring in the wilds of Northumberland county, N. B., lately, and has discovered a river and numerous lakes which do not appear on any of the published maps, and which are bordered by extensive and valuable forests. From all that we can learn, this is likely to prove a better tract of lumber land than any at present known in the province. Mr. Jack is preparing a full report of his explorations, which, in due time, will be submitted to the surveyor-general and made more generally public.



DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & CO., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., JAN. 1, 1884.

TO OUR SUBSCRIBERS.

THOUGH a great number of our subscribers have responded to the notification which we sent to every one of them who was in arrears, to remit to us the amount due for their subscription to THE CANADA LUMBERMAN, yet there are too many instances in which this matter is still neglected. Once more we must remind those who have paid us the compliment of taking our paper, that journalists and printers can no more live upon compliments than any other men. Those who are debtors for such small sums may think them insignificant, as they are individually, but taken together, they represent an amount that is of consequence to us. Our disposal of the business to a joint stock company, also renders necessary the closing of all outstanding accounts. We would, therefore, be glad to see each one remitting promptly the amount due to us.

TOKER & CO.

DENSE forests are increasing in Australia, the climate is growing more moist, and even the great central desert may become habitable.

NEWS from the Eau Claire, Wisconsin lumber district is to the effect that the log cut will not be curtailed as much as has been predicted, and that it will fall very little short of that of last year.

SIX additional miles of the Chippewa & Menomonie River Logging Company have been finished this fall, making 12 miles in all completed. The iron for the last six miles was hauled 21 miles by wagon.

THE *American Lumberman* says:—Walnut lumber is again on the boom, and train after train loaded with it, both rough and dressed, is passing through Louisville, Ky., to the north, east and northwest, some of it being billed to the furniture factories in Maine and Massachusetts.

THERE is something worthy of consideration in the fact that there was an excess of 248,000,000 shingles, and 40,000,000 lath put on the Chicago market this season. The *American Lumberman* says it demonstrates that there has been a great excess of poor logs cut in the northwest, and that it explains why the better grades of lumber keep climbing up in price.

A RATHER sensational case has developed in Whitney township, Mich. A party at that point has been detected in cutting away the marks from a lot of logs, and of appropriating some lumber that came ashore, which belonged to an insurance company. The transactions are said to have occured in the months of September and October, 1882. The owners of the property are now investigating the matter, and music will doubtless follow.

SAW-MILLS IN RUSSIA.

The number of saw mill in Russia is very considerable, as the abundance of standing woods and forest and the large home and foreign demand for timber would lead us to expect. The industry is most developed in the vicinity of the export ports, as it is more advantageous to ship the timber sawn than rough. The official estimate of the annual value of the produce of Russian saw mills, given below at 13,000,000 roubles affords no idea of the real extent of this branch of industry. There is quite 30,000,000 roubles worth of timber exported annually from Russian ports, of which only a small portion is shipped in a rough state, whilst the demand for home consumption is probably still larger. The estimate takes account only of the largest and most important saw mills. Besides these are a great number belonging to landed proprietors who own tracts of forest and have small saw mills on their estates, which are not included in the estimate. The largest export of ship and other timbers is from Riga, which is not to be wondered at, as Livonia is one of the chief seats of the timber-sawing industry. In Riga itself are fifteen saw mills of the largest size, worked by steam and giving employment to 1,753 hands. In 1879 they delivered 3,687,500 roubles worth of sawn timber. Besides these are three others, two of them driven by steam, at Dorpat, and others at Pernau and Wolnar. Next in importance to Riga stands Ss. Petersburg, with nineteen saw mills, sixteen of which use steam of an aggregate of 390 horse-power, and which employ 746 hands, and produced in the last-mentioned year 1,141,700 roubles worth of sawn timber. There are other large steam saw mills in the neighborhood, at Ladoga, New Ladoga, Schlusselberg, &c., and some smaller ones, driven by water, in the Tsarkoe Zelo district. Of all the Governments into which Russia is divided, that of Lublin contains the largest number of saw mills, 83, but, except those in the Novo-Alexandrovsk district, none are of any size. At Wendau, in Courland, is a very large steam saw mill, employing 131 hands, which in 1879 produced 235,000 roubles worth of sawn timber.

In all, there are included in the official statistics for 1879, 397 saw mills, employing 865 hands, and having an annual production of 13,000,000 roubles of sawn timber. The actual amount delivered in 1879 was 13,000,000 roubles worth. Statistics of earlier decades are wanting; but from the returns of the Finance Ministry it appears that the estimated number of saw mills in Russia (including Finland) in 1869 was 179, which employed 3,556 hands, and produced 3,888,798 roubles worth of sawn timber in the year. It therefore seems that in the course of the ten years 1869-79 the number of saw mills had increased 122 per cent., the number of hands employed in them 142 per cent. and the value of the produce 235 per cent. This rapid increase has been due to the introduction of steam-power.

Besides saw-mills proper, there are manufactories of wooden articles, or of corks, scattered through the country. In St. Petersbug are 102, employing 355 hands. At Piotrkov and in Lublin are numerous factories of the same kind, some of which employ 100 to 130 hands. These are chiefly engaged in the manufacture of parquetry for flooring. At Riga are eight, employing 1,250 hands and two steam-engines, and which produced, in 1879, 1,281,000 roubles worth of corks and roof shingles. At Odessa are two factories devoted to the cutting of corks, the demand for which is increasing with the growing use of beer. At Minsk and Olgopol wooden pegs are the articles of manufacture; at Tambov, spokes; at Novogorod, turnery. Many of these factories, which are nearly all of small size, are employed in the manufacture of household furniture and utensils, which are lacquered in particolor or bronzed in the Russian style. There are numerous carriage factories and waggon builders' establishments in Russia, but they are all on a small scale. Of the former Ekaterinoslay possesses the largest number, 25; St. Petersburg next, 19. At Archangel, on the White Sea, are two. Of waggon-building factories about the largest are that of Petroff, of Moscow, employing 133 hands, with an annual turnover of 132,000 roubles, and that of Tuliakoff, of St. Petersburg, which employs 192 hands, and has an annual turnover of 130,000 roubles.

Matchwood manufacture is a widespread industry in Russia, but the establishments are all small. With the exception of one at Kiev, none use steam power, and none have a higher average annual production than 7,000 roubles. The wood is said to be excellent of its kind, and there is a considerable export to Austria and Sweden.

In 1869 there were 85 matchwood manufactories employing altogether 2,214 hands, which produced matchwood to the value of 488,421 roubles in the year. In 1879 there were 239 such manufactories, employing 5,249 hands, which in the year produced 1,802,090 roubles worth of goods.—*Timber Trades Journal.*

[A roubles may be roughly said to be worth 75 cents].—ED.

THE LIVERPOOL TRADE.

James Smith & Co.'s wood circular and prices current, dated Liverpool, 1st December, says the arrivals since our last have been 69 vessels, 59,284 tons, against 79 vessels, 53,470 tons, in the corresponding period last year, and 61 vessels, 49,225 tons in 1881.

The import still continues too large, and only through the reduced values has the consumption been stimulated, stocks therefore are generally heavy, and, with prospects of strikes in this district, there is little hope of any improvement for some time to come; there must also be a much reduced supply before any change for the better can take place. The late failures have done much to shake confidence. Money continues low, and freights are easier.

COLONIAL WOODS.—Yellow pine:—The import has been large, consisting of 452,000 feet; the consumption has been well maintained, but the stock is heavy, viz., 1,006,000 feet against 723,000 feet at this time last year. Square pine of 50 feet average, and of f. a. q. quality, has been sold at 16d per foot, and of waney board pine the sales have been of 28 inch average at about 2s. 11d. per foot; 20 inch average at 2s. 6d. per foot, and 19 inch average, 2nd quality, at 2s. per foot ex quay. Of maple the last sale was of a parcel from Quebec, nearly 18 inches average, at 2s. 4d. per foot. Pine deals are excessive in stock, especially of the lower qualities, and those offered at auction found no buyers. Prices rule very low; and sales are difficult to make. Quebec pine deals have gone largely into consumption, and the present stock is only an average one. The sales have been of 1st quality (undersized) at £18 per standard; 2nd quality (chiefly undersized) at £14 per standard; 3rd quality (poor specification) at £8 10s. per standard; and 4th quality Ottawa at £8 per standard.

LUMBER SHIPMENTS FROM QUEBEC.

From the *Chronicle's* yearly review of the wood trade of Quebec, it would appear that a determined effort has been made to limit production this season. It says:—

"Merchants held off more than ever from purchasing, apparently determined to make the lumbermen carry the weight of the stock this winter, and this policy they pursued to the end of the season, so that, of the stock wintering over at least two-thirds are still in first hands, an almost unparalleled occurence. This anomalous condition of things would naturally have

the effect, and, from all we can learn, has had the effect of inducing a policy of caution and prudence on the part of manufacturers, nearly all of whom loudly proclaim their determination of reducing the production from at least one-third to one-half in most lines; and there is plenty of collateral evidence that, for once, they are sincere in this determination, one proof of the fact being that only about half the usual number of axe-men are said to have been engaged in Quebec for work in the woods this winter. * * * The production of both pine and spruce deals will be curtailed at least one-third, probably one-half. We hear that the Montmorenci establishment will not operate at all this winter, and some other mills have also decided to shut down. These are favorable omens, and, if the square timber manufacturers abide by their very avowals as to a limited production, the trade may come right again in time."

The stocks wintering at Quebec include about 8,000,000 feet of square white pine, which will probably all be wanted for the spring vessels. The stocks of waney and oak and elm are light. As regards the extent of the fleet carrying wood from Quebec the review says that in 1881 there was a dfieciency as compared with 1880 of 252 vessels, 207,476 tons, and in 1882 there was again a deficiency as compared with 1881 of 50 vessels, 49,088 tons. "This year," says the review, "we have not made up last year's shortage as regards the number of vessels, but we have a little more than done so in the amount of tonnage. In ocean steamers the increase in arrivals this year has been very considerable." The following is a comparative statement:—

Comparative statement of arrivals and tonnage at Quebec, from sea, in 1882 and 1883, up to 22nd November inclusive:—

	Vessels.	*Tons.*
1882	593	449,782
1883	627	504,962
More (1883)	34	55,180

Number of ocean steamers which arrived here up to date, and to the corresponding date last year:—

	Steamers.	*Tons.*
1882	220	356,254
1883	269	451,509
More (1883)	49	95,255

Of the increasing use of steam vessels for carrying deals to Europe the review says:—

"A large quantity of deals were carried by steam tonnage. In addition to the regular lines, there were a number of outside steamers that had been engaged on time charters to carry coals from the Lower Provinces to Montreal, but through some trouble in Montreal these charters fell through, and the steamers were placed on the market to carry deals to Great Britain. Considering the amount of steam tonnage offering, it was astonishing how the rates of freight were maintained. This feature of shipping deals by steamer is one that is likely to increase year by year, and, unfortunately for Quebec, there is a growing tendency to make these shipments from Montreal, owing to the fact that the cost of loading there is so much lighter than in Quebec. Both steamers and sailing ships are said to prefer to load their deal cargoes in that port, as they are not subjected to the regulations and restrictions that obtain here."

This testimony to the advantageous position which Montreal holds as a shipping point for deals is valuable. The question of loading charges is one which is being discussed in every Atlantic port in America, and it is well that all who are interested in building up the commerce of Montreal should keep the fact here stated constantly in view. Indeed, the policy of freeing shipping seeking our port from every form of port charges is one which should be persistently urged until Montreal is made practically a free port in this sense.—*Montreal Herald.*

Fashions and the Timber Trade.

Changes in fashion for the interior fittings of houses are not without effect on the timber trade. With the introduction of the Queen Anne style of decoration, and the use of stained glass and Turkey carpets, has come in a revival of the use of oak floor boards. In new country mansions and the better class of houses in London, since doctors say that the entire flooring of rooms should not be covered with carpets for sanitary reasons, it has been quite the fashion to lay oak flooring as a border, superceding the stained wood lately in favor. To meet this new demand of fashion Mr. T. Forman, of Walnut Tree Walk, Kennington, has laid himself out to supply ¾ in., 1 in. and 1¼ in. oak flooring in narrow widths of the very best quality. We have had the opportunity of inspecting Mr. Forman's large stock of this class of goods, and no better could, we think, be found. The boards are all carefully stacked, well seasoned, in good lengths, cut full, and made from the best selected wainscot oak. The very fine figure, its solidity and durability, and high polish it will take, render oak an unrivalled material for flooring, and now that the fashion is revived is likely to have a good run.—*Timber Trades Journal.*

A Beautiful Gift.

The Great Rock Island Route has issued a new and most comprehensive Cook Book, of 128 pages, filled with new and reliable receipts from the best caterers of this and other countries. No housewife can afford to be without it; and though worth one dollar, it will be sent to any address, postpaid, upon the receipt of ten cents in stamps. As they will go like hot cakes send at once to E. St. John, G. T. & P. A., Chicago, Illinois.

Saginaw Shipments.

The Bay City *Lumberman's Gazette* gives the following summary of Saginaw shipments for a series of years:

1874	4,628,068
1875	3,113,721
1876	6,641,209
1877	4,970,859
1878	2,372,426
1879	4,221,731
1880	1,953,000
1881	1,537,073
1882	758,682
1883	882,811

Who Owns the Pine?

Says a Muskegon mill owner to a *News* reporter:—"The great bulk of the pine lands have been bought up by capitalists, a kind of a syndicate whose numbers can nearly be counted on the fingers. They will control the market in the future, and you can write it down now that the day of cheap lumber is gone forever. Logs that could be put into the river in years past for $8 to $9 per M. are away up to $12 and $26 this winter, and when you add the cost of getting them and sawing them, you can figure for yourself how high lumber will be next summer. Like everything valuable, the scarcer it becomes the more it will be hoarded up, but in the lumber business economy begins too late. We should have commenced saving many years ago, not only in the cutting of logs, but in the finer handling of the lumber after it was cut. There was too much waste, and we are beginning to feel it now. The day of the reckless slaughter of pine has passed away with the day of cheap timber.

Ship-Building in Maine.

PORTLAND, Maine, Dec. 27.—The Maine ship building industry has been more satisfactory this year than was expected on account of the prevailing low freights. There were 174 vessels built against 168 last year, comprising 9 steamers, 43 ships, 4 barques, 6 barquentines, 2 brigs, 133 schooners, and 7 sloops. The work was more evenly divided than last year.

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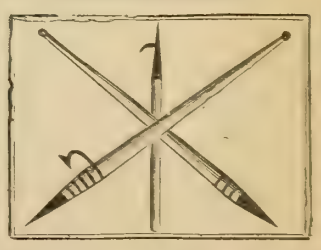
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FOREST CLEARING.

Those who are laudably endeavoring to stop the wholesale destruction which has been carried on in clearing out the forests of this country will be glad to hear that the lumber manufacturers of the northwest have decided that the work of cutting off the valuable timber of the northwestern states must now be retarded. Their reasons for coming to this decision are not from any love of the beauty or the benefits which the forests confer on the country, but simply because they find that it is not paying them to clear off the forests at the rate they have been doing, and that if continued it will pay them still less. They have overstocked all the markets, and as a consequence prices have sunk so low that the trade has become comparatively unprofitable. In this way the destruction of the forests has unintentionally received a check, and before the havoc is resumed perhaps the matter of their better preservation may receive the attention of the national legislature.

It is time that the subject did receive attention. The commissioner of agriculture has shown that the supply of various kinds of timber will be exhausted within a very few years if the present rate of consumption is kept up. In the state of Maine pine will only last four years and spruce 15, and the pine forests of Michigan and Minnesota will be cleared out in 10 years, and those of Wisconsin in 20. Already lumbermen are turning their attention to other states. According to Governor Berry they "are pouring into the state of Arkansas every day from Michigan and Wisconsin." The saw mills in that state have more than quadrupled since 1880, and the production of lumber there is twenty times greater than it was just seven years ago.

As before pointed out, the question of preserving a proper proportion of forests for the benefit of the climate, the streams, the soil, and indeed the general good of the country, is a national one. Private individuals cannot reasonably be expected to sacrifice their rights and interests for the good of the community at large without due compensation. To the lumbermen the forest is just so much money so soon as he can clear it out and place it in the market, but in the northwest he finds he cannot do that profitably and so he has called a halt; however, he will be up and at it again so soon as the markets improve, quite regardless of any other result than simply what the lumber will bring. And no one can blame him; it is not his duty to preserve the forest, but that of the nation or the state.

MECHANICAL INVENTIONS.

Heating Railway Cars.—An improvement bearing on the present manner of heating railway cars has been patented by Mr. Michael Hurly, of Quebec, Canada. The invention relates to safety couplings for connecting steam conducting pipes, the two sliding parts of the coupling being connected together by a spiral spring, to secure a more perfect steam light joint, etc.

New Truck.—A railway car truck has been patented by Mr. James E. Squire, of Glencoe, Ontario, Canada. Its construction is such that the load rests upon the periphery of the wheels in succession as they come under the treads, thus diminishing friction; the wheels are intended to turn only half as often as ordsnary trucks with the same speed, so that less oil will be required and there will no danger of hot boxes.

Two Wheeled Vehicles.—An improvement in two wheeled vehicles has been patented by Ir. John C. Bach, of Hillsdale, Mich. This invention is designed to meet a want widely felt since two wheeled carriages have recently become very fashionable. The body is so pivoted as to oscillate at its rear end, and a centrally arranged spring is so made to operate that the body is protected from the swing of the horse so as to prevent the forward and backward rocking motion of the rider.

Illumination of Steam Boilers.—The lighting up of the interior of steam boilers was long ago suggested. It has lately peen carried into practical operation by the Patent Steam Boiler Company, London. They arrange lights within the boiler in such a way that the cascades, currents, and miniature whirlpools of the water may be clearly observed. It is believed that useful information will be derived from observations touching the cause of priming, the best modes of seperating steam from water, etc.

Delicate Calipers.—A micrometer calipers have been patented by Mr. Leapold L. Remacle, of New York city. While it can be folded compactly and used to measure considerable spaces, it will likewise measure twentieths and thousandths of inches. A screw works longitudinally in a U-shaped frame, and the rimmed head of the screw is divided into measures: against this head, when the calipers are in use, is brought down a pivoted straighted ge rule. The pitch of the screw being one-twentieth of an inch, and its rimmed head being marked off into parts, any required measurement as low as thousandths of any inch can be readily obtained.—*Sci. Am.*

CUTTING HARDWOOD.

The *Northwestern Lumberman* says:—A gentleman who has worked for many years among hardwoods, and who recently visited this office, gave some information that may be of value to others. In his opinion the best time to cut and stick hardwood lumber is in the summer, so it will get a good start at seasoning before cold weather comes on. Its tendency to check, he thinks, is due to the difference in the temperature of the inside of the wood and the surrounding atmosphere. Hickory is the most difficult wood to handle, and should not be worked in the spring months. Often when sawing it before the weather has become warm and settled, as soon as a band saw enters a stick it splits from end to end. He would not cut hickory in August or September, as worms are liable to work in it if cut during those months. Why this is so he is unable to tell. He once visited a store-room of a large carriage shop, and on the floor under the wheels he noticed fine dust, which, upon inspection, proved to be worm dust from the hickory spokes. The wagons were painted, and the worm holes were so small that they could hardly be detected without the aid of a microscope. The worms delight in working in the hardest, finest wood. It is not the gentleman's theory that the wood is attacked from the outside, but that the worms propagate in the wood if cut in the season named. When once the worms show themselves in a piece of hickory, it is doomed, The powdering goes on, until at length the stick will break in two by its own weight. All hickory cut in August or Sepetember does not become wormy, but so much of it does that the gentleman thinks that by far the safest way is to cut it during the other months.

The Lumber Trade.

The following letter appeared recently in the Toronto *Telegram*:—

Sir,—Noticing your remarks in a recent issue about the dulness of the lumber trade, and that a large concern was said to be in difficulties, it would lead to the supposition that this branch of trade was in a shaky condition. If, however, it were known that one company at least, in which English capital is heavily invested, has been paying much more for the manufacture of its lumber, (something like $30 per thousand more than current rates at other mills), occasioned by the employment of highly salaried officials, who know nothing practically about the business, it need not be wondered at that they are beset with "difficulties," but it does not necessarily follow that the lumber business is in a bad way. The writer is in a position to know that the production of lumber has been profitable for several years past, and that those engaged in the business—who have properly attended to it—have made money out of it; and that, although the coarser grades of lumber are at present somewhat heavy and slow of sale, there is a fair margin on them, and, further, that both mill men and dealers generally are in a better condition financially at the present day than ever before.

LUMBERMAN.

A Swedish Match Factory.

At Jonkoping, Sweden, says an exchange, is the oldest and largest match factory in the world. It was established 100 years ago, and there are now to be seen specimens of the matches used at the beginning of the present century, consisting of big fagots of wood furnished with a handle and a tip to dip in a bath of sulphur. The wood from which the present kind of matches is made is taken from the adjacent forests, which are divided into 50 sections. Every year one section is cut and then replanted with young trees. The trees are hewed into planks in the forest and cut into slivers in the factory. The boxes are made of the outside of trees. The factories are on the banks of lakes which are connected with one another by wide canals. Millions of matches are turned out each day. Some idea of where they all go to may be obtained from the statement that there are at least 280,000,000 of matches burned each day in the United States, or an average of five matches for each person.

THE LUMBER TRADE.

The Quebec *Chronicle* of Dec. 18th publishes a length review of the lumber trade during the past season, of which the following is an extract:—As regards the stocks wintering, square white pine will be about 8,000,000 feet, but it must be remembered that there is not this year any old timber left behind in tne Ottawa streams to come down next spring, and considering the reduced production contemplated, and the fact that it will be late next season before the bulk of the new wood can reach the market, it may be inferred that all of this quantity that is good enough to be shipped will be wanted for the spring vessels. The wintering stock of waney will be small, and it contains very little large wood. In oak and elm the wintering stock will be light, not more than about one-half that of last year in oak and about one-fifth in elm. The production of both pine and spruce deals will be curtailed at least one-third, probably one-half. We hear that the Montmorenci establishments will not operate at all during the winter, and some other mills have also decided to shut down. These are favorable omens, and if the square timber manufacturers abide by their very distinct avowals as to a limited production the trade may come right again in time. Nature may be said to be working with these gentlemen in their own interests this season, for, if we are to believe the weatherwise, the present winter is going to be anything but favorable for lumbering operations, there being up to the present, no snow in the lumbering districts of Western Canada and the States, which will materially interfere with hauling to the different streams. Under all the circumstances, and from all we have been able to gather, we should hope that the end of next season will show that things have taken a turn for the better. This season has been depressing enough. We cannot close this review without alluding to the unfortunate financial difficulties which have siezed unpon certain lumber firms in this city, in which they have the sympathy of the community. We have, however, fortunately been free from any panic or very great fluctuation in values, and bad as things are, they might certainly have been worse.

Failures in the Lumber Trade.

There were rumours about the 18th of this month that another extensive lumber firm at Quebec had succumbed to the financial depression in the export trade. The liabilities are set down at a large figure, but the assets are said to be equally large, and there will be little if any loss.

The Beaver Lumber Company below Quebec has failed, and owes banks in Quebec & Montreal as well as other creditors $108,000. About $90,000 are due to the banks, which are all safely secured, but the other creditors are expected to fare badly.

Another Great Lumber Failure.

There was some commotion observable in financial circles at Montreal on Monday on the news of the great lumber exporter of St. John, N. B., Mr. George F. Hood's suspension for a quarter of a million dollars. The information came privately, and has not been published yet, but it was well known at the bank of Montreal, with which Mr. Hood did some of his business. His account, however, was kept in the Bank of New Brunswick, where the most of his paper is held. The Bank of Montreal has only $20,000 of it maturing, and the authorities here do not anticipate any loss, as Mr. Hood shows a large surplus and is only asking time to pay in full.

HOW WOOD PULP IS MADE.

No other manufacturing interest has made greater progress in securing new raw materials during the last few years than paper makers. There has been such an enormous multiplication of books and newspapers in recent years that the invention of wood pulp is all that has prevented a great increase in the cost of paper.

The pulp which is used in the manufacture of the cheapest newspapers is simply ground wood, and its presence can be detected by letting a drop of nitric acid fall upon the paper. The acid unites with the resinous substance of the wood, and leaves a brown stain upon the paper. A large portion of the wood pulp now in use, however, is subjected to a chemical process which removes all but the pure fibre, and makes a material worth 4¼ to 4½ cents per pound, whereas the ground wood pulp sells at 1¾ to 2 cents. One of our walks this week shall be through a pulp mill.

The wood comes in perfectly free from bark, but otherwise resembles cordwood for burning. It cost at this mill is $8 or $9 per cord, and two cords of wood make a ton of pulp worth $85 to $90. The log of wood first goes through a machine provided with a cylinder of oblique knives revolving against a bed knife like a hay cutter, which speedily converts the whole log into small chips. This machine thus cuts up 25 cords per day. A blower carries these chips through a pipe into an upper apartment, whence they are fed into huge boilers called "digesters." About three and one-half cords of wood are fed into one of these digesters, and the boiler is then filled up with caustic liquor composed of 60 parts of lime and 100 parts of soda and dissolved in hot water. The wood is boiled eight hours in these liquors under a pressure of 110 pounds. The pressure is then reduced to about 60 or 80 pounds, and the contents of the digester are blown into a receiving tank.

Being thus blown out under pressure, the fibres of the wood are disintegrated and resolved into sparate particles. The receiving tank has a perforated bottom, and clean water is now let in and carries the liquor with the gum of the wood down through the perforations designed for the purpose. The aperatures are then closed and clean water is again let in and mixed with the fibres. Meantime, the waste liqour from the digesters runs into reclaiming furnaces, which are simply huge pans arched over and lined with fire brick. These furnaces are fired to a great heat so as to evaporate the water and burn out the gum, thus recovering about 80 per cent. of the soda ash. The reclamation of this soda ash constitutes the entire profit of some mills.

The fibre which we left in the receiving tank immersed in a second bath of clean water after washing out the gum which had been loosened in the digesters, is now pumped into engines like the washers of a paper mill consisting of a huge tank about 21 feet in diameter one way by 7½ the other, and three feet deep. In this tank is a huge cylinder with a metallic fluted surface, which works against a similar fluted surface in the bottom of the tank. The cylinder occupies the radius of a circle of which the tank is the circumference, and the mass of pulp with which the tank is filled flows round and round in a constant current under the cylinder and out again. Clean water is flowing into the engines during the first 30 or 60 minutes of this process, and dirty water is flowing out at the same time in such a manner as to give the fibres a thorough washing. Bleaching powder is then put in and the pulp converted to the whiteness of driven snow.

The pulp is then run into the "stuff chest" or reservoir, from which it can be pumped into the final process as needed. The last process consists of mechanism very similar to a paper machine, upon which the pulp is run in a thin sheetover brass wire cloth so that the water drops through. The wire cloth bed of the machine has a lateral vibratory motion which felts the fibres together and discharges them in the shape of a large continuous sheet of pulp ready for use by the paper-maker. The pulp is

sold on a dry basis, but as taken from the mil often contains 60 per cent. of water.—*Boston Commercial Bulletin.*

QUEBEC.

The *Monetary Times* says :—The three seasons last past have shown limited shipments of wood at Quebec, compared with such years as 1874, 1876 and 1877. Last year's even, was 25 per cent. below 1880, in shipments laden with timber or lumber. A comparative statement of of sailing vessels cleared at the Port of Quebec from sea from the opening to the close of navigation in the past ten years is as under :

Year.	*Vessels.*	*Tons.*
1874	854	636,672
1875	642	478,441
1876	786	624,110
1877	796	670,627
1878	476	399,833
1879	433	364,628
1880	634	555,451
1881	459	380,186
1882	426	359,925
1883	487	416,169

In some of the large saw mills in the Northwestern lumber districts a small appliance is attached to the trimmer.

The largest single contract ever made by St. Croix lumbermen is that entered into between Messrs. F. H. Todd & Sons, of the one part, and Messrs. Tracy, Murchie & Love, of the other part. for the cutting and yarding of 7,000,000 feet of logs during the coming winter. The ground to be operated on covers a block six miles square on the Wissattaquoik stream, in Piscataquis county, Maine.—*St. Croix, N. B., Courier.*

Some dealers, says the *Northwestern Lumberman*, are arguing in favor of lath of smaller dimensions. The old size of ½x1½ inches has given away to some extent to ⅝x1½, but less width is wanted, say ⅝x1⅜. The latter size would permit the loading of 60,000 lath in a car of 24,000 pounds, while but 50,000 can be loaded of the present size. Less plastering is required for thin lath, and they are preferred by many on that account.

Negotiations have been opened at San Francisco recently for the shipment of a large quantity of Oregon pine and California Redood to Liverpool. Shipments made some months ago appear to have created a demand for certain kinds of lumber, of which the above are most desired. Recently northern lumber was sent east by clipper, and two ships now in berth are taking Washington Territory and California lumber, including a large amount of shingles. It is believed that the next two years will witness a live trade with Europe.—*Victoria, B. C., Standard.*

George C. Tyler, at Baltimore, Md., is a manufacturer of packing cases for canned goods. He obtains logs from the forests of Virginia and North Carolina, towing them to the mill and splitting them into all sizes for ship, bridge and ordinary use, including the manufacture of lumber for boxes. During the late severe gales on the Chesapeake bay, he towed two immense rafts safely in, though the gale was the worst ever known. Some of timbers brought in are 80 feet long, and 12 or 15 inches square. The Canton Box Factory, of East Baltimore, occupies six acres of ground with its buildings and goods.

The great French walnut log brought across the waters by L. Hirsch & Brother, New York City, was recently cut in two, and half of it made into veneers. A 12-foot cross-cut saw was especially made to cut it, but in a half day it was broken, and a larger one made. Two days of constant sawing was required to complete the job. Then the log had to be quartered, because the largest veneer knife was not equal to the emergency. The veneers made from the log are described as having a handsome black and orange color, and beautifully figured. The quarter that was cut contained about 12,000 feet of veneers, which is a basis for estimating the contents of the whole log at 96,000 feet.

The Waterloo *Advertiser* of Dec. 7, says :—It being Mr. S. S. Hall's intention to move from Waterloo in a few days to engage in the manufacture of wooden ware on a large scale at Beebe Plain, last Saturday evening a number of Mr. and Mrs. Hall's host of friends in this place gave them a surprise party. During the evening they were presented with a rich and handsome butter dish, accompanied by an address. Mr. Hall made a suitable reply on behalf of Mrs. Hall and himself. A pleasant evening was spent.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain of cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup For Children Teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. I cures dysentry and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for Children Teething is pleasant to the taste, and is the prescription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., wil send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N.B.—No risk is incurred, as thirty days' trial is allowed.

Singers and public speakers are always benefitted by using Down's Elixir, as it removes the hoarseness and increases the power of the voice. Take small doses often. Price, 25c, 50c, and $1.00

Railway Accident.—Frank Spink, Wilton Avenue, Toronto, some time ago received a bad injury by an accident on the G.T.R. The severe contusions were quickly healed by the use of Hagyard's Yellow Oil.

Highly Agreeable.—One very valuable feature of Dr. Low's Pleasant Worm Syrup is, that it is highly agreeable to take, and all varities of Worms, tape worm included, can be safely expelled by it, without recourse to harsh and sickening drugs.

DOWNS' ELIXIR

N. H. DOWNS'

VEGETABLE BALSAMIC

ELIXIR

DOWNS' ELIXIR DOWNS' ELIXIR

Has stood the test for Fifty-Three Years, and has proved itself the best remedy known for the cure of

Consumption, Coughs, Colds, Whooping Cough and all Lung Diseases in young or old. Sold Everywhere.

Price 25c. and $1.00 per Bottle.

DOWNS' ELIXIR

Burdock BLOOD BITTERS

WILL CURE OR RELIEVE.

BILIOUSNESS, DYSPEPSIA, INDIGESTION, JAUNDICE, ERYSIPELAS, SALT RHEUM, HEARTBURN, HEADACHE, DIZZINESS, DROPSY, FLUTTERING OF THE HEART, ACIDITY OF THE STOMACH, DRYNESS OF THE SKIN,

And every species of diseases arising from disordered LIVER, KIDNEYS, STOMACH, BOWELS OR BLOOD.

T. MILBURN & CO., Proprietors, Toronto.

The American Hotel,

BARRIE, ONT.

Collier Street, Adjoining the Market.

RATES REASONABLE, CENTRAL LOCATION, FREE BUS TO AND FROM ALL TRAINS.

☞ Every accommodation for Commercial and LUMBERMEN.

1Ltf W. D. McDONALD, Proprietor.

J. K. POST & CO.

LUMBER MERCHANTS

And Shipping Agents.

OSWEGO, N.Y.

1Lt

HILLOCK & KENT,

Wholesale and Retail Dealer in

Pine and Hardwood Lumber, Lath, Shingles Veneers, Wave Mouldings & Fancy Woods.

103 Albert Street, TORONTO.

27L22

VULCAN IRON WORKS

[ESTABLISHED 1842.]

STEWART & FLECK, Jr.,

Manufacturers of every Description of

Saw and Grist Mill Machinery,

Water Wheels, Steam Engines, Derricks, Boilers, Steam Pumps, Mining Machinery

20L REPAIRS PROMPTLY EXECUTED. 1y

Wellington Street, OTTAWA, Ont.

McCraken, Gall & Co.,

WHOLESALE AND RETAIL

LUMBER MERCHANTS

And MANUFACTURERS,

☞ Dealers in WALNUT, BUTTERNUT, CHERRY, CHESTNUT, ASH, OAK, WHITEWOOD, and all kinds of Hardwood and Pine Lumber. PICTURE BACKING, HOLLY, EBONY, LIGNUM-VITÆ, RED CEDAR, &c, American and French VENEERS.

Orders for Lumber and all kinds of Factory Work promptly attended to. Lumber Kiln dried to order.

Yard : Cor. Wellington & Strachan Aves.

Factory : Corner Soho and Phœbe Streets.

Office : 39 Adelaide Street East, (First Floor, nearly opposite the Post Office.

L5 TORONTO, ONT. 1y

GRATEFUL—COMFORTING.

EPPS'S COCOA

BREAKFAST.

"By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well-selected Cocoa, Mr. Epps has provided our breakfast tables with a delicately flavored beverage which may save us many heavy doctor's bills. It is by the judicious use of such articles of diet that a constitution may be gradually built up until strong enough to resist every tendency to disease. Hundreds of subtle maladies are floating around us ready to attack wherever there is a weak point. We may escape many a fatal shaft by keeping ourselves well fortified with pure blood and a properly nourished frame."—*Civil Service Gazette.*

Made simply with boiling water or milk. Sold in tins only (¼-lb. and lb.) by Grocers, labelled thus :

JAMES EPPS & Co., Homœopathic Chemists, 1yL21 London, England.



HILL'S English Extract of BUCHU, One of the Best

KIDNEY

INVESTICATORS IN USE.

It is a specific in the cure of all diseases of the Kidneys, Bladder, Prostatic Portion of the Urinary Organs, Irritation of the Neck of the Bladder, Burning Urine, Gleet, Gonorrhea, in all its stages, Mucous Discharges, Congestion of the Kidneys, Brick-dust Deposit, Diabetes, Inflammation of the Kidneys and Bladder, Dropsy of the Kidneys, Acid Urine, Bloody Urine, Pain in the Region of the Bladder, PAIN IN THE BACK, Urinary Calculus, Renal Calculus, Renal Colic, Retention of Urine, Frequent Urination, Gravel in all its forms, Inability to retain the Water, particularly in persons advanced in life. IT IS A KIDNEY INVESTIGATOR that restores the Urine to its natural color, removes the acid and burning, and the effect of the excessive use of intoxicating drink.

PRICE, $1 ; or, Six Bottles for $5.

☞ Send for Circular. Sold by all Druggists.

W. JOHNSTON & CO.,

161 Jefferson Ave., DETROIT, MICH.

J. T. LAMBERT,

Lumber and Commission Agent.

ORDERS FOR DIMENSIONS AND ALL OTHER KINDS AND GRADES OF

American Lumber

PROMPTLY ATTENDED TO.

Timber Limits and the Square Timber Trade a Specialty.

Office, Wellington Street, OTTAWA. 1Ltf

AXES

And LUMBERMEN'S

HARDWARE

Broad, Scoring, Blocking, Timber and Chopping AXES,

(Of Superior Shape and Quality.)

Chalk Lines, Rassing Knives, Timber Guages, Cross-Cut Saws, Files, Sleighshoe Steel, Chains, and general line of HARDWARE at the LOWEST PRICES.

☞ SOLE AGENT IN CANADA for the Sale of the following CELEBRATED AXES:—B-4-ANY, RED MANN, and WETMORE'S HAND MADE, warranted.

☞ The Best in the World. ☜

GEORGE STETHEM

IMPORTER OF HARDWARE,

PETERBOROUGH, ONTARIO.

A MAN

WHO IS UNACQUAINTED WITH THE GEOGRAPHY OF THIS COUNTRY WILL SEE BY EXAMINING THIS MAP THAT THE



CHICAGO, ROCK ISLAND & PACIFIC R'Y

By the central position of its line, connects the East and the West by the shortest route, and carries passengers, without change of cars, between Chicago and Kansas City, Council Bluffs, Leavenworth, Atchison, Minneapolis and St. Paul. It connects in Union Depots with all the principal lines of road between the Atlantic and the Pacific Oceans. Its equipment is unrivaled and magnificent, being composed of Most Comfortable and Beautiful Day Coaches, Magnificent Horton Reclining Chair Cars, Pullman's Prettiest Palace Sleeping Cars, and the Best Line of Dining Cars in the World. Three Trains between Chicago and Missouri River Points. Two Trains between Chicago and Minneapolis and St. Paul, via the Famous

"ALBERT LEA ROUTE."

A New and Direct Line, via Seneca and Kankakee, has recently been opened between Richmond, Norfolk, Newport News, Chattanooga, Atlanta, Augusta, Nashville, Louisville, Lexington, Cincinnati, Indianapolis and Lafayette, and Omaha, Minneapolis and St. Paul and intermediate points.

All Through Passengers Travel on Fast Express Trains.

Tickets for sale at all principal Ticket Offices in the United States and Canada.

Baggage checked through and rates of fare always as low as competitors that offer less advantages.

For detailed information, get the Maps and Folders of the

GREAT ROCK ISLAND ROUTE,

At your nearest Ticket Office, or address

R. R. CABLE, Vice-Pres. & Gen'l M'g'r. E. ST. JOHN, Gen'l Tkt. & Pass. Agt.

CHICAGO.

Market Reports.

MONTREAL.

From Our Own Correspondent.

DEC. 26.—The weather has been cold and favorable for this line of business, which, however has been kind of slack, and most firms have been busy stocktaking. News from the lumber regions on the Ottawa is rather contradictory, some lumbermen reporting that they are putting out only about half the quantity of last year, while others are reported as turning out about double the quantity, but the general opinion here is that the output will be much beyond the requirements of trade. The demand here for lath is not very large but is in excess of the supply, which has caused another advance in price, and it is thought probable that the quotation next month will be $3.00, other prices are strong. We quote ex yard :

Pine, 1st quality, ₱ M	$35 00@40 00
P ne, 2nd " ₱ M	22 00@24 00
Pine, shipping culls, ₱ M	14 00@16 00
Pine, 4th quality deals, ₱ M	11 00@12 00
Pine, mill culls, ₱ M	10 00@12 00
Spruce, ₱ M	10 00@13 00
Hemlock, ₱ M	9 00@10 00
Ash, run of log culls out, ₱ M	20 00@25 00
Bass, " " ₱ M	17 00@20 00
Oak, ₱ M	40 00@50 00
Walnut ₱ M	60 00 100 00
Cherry, ₱ M	60 00@80 00
Butternut, ₱ M	35 00@40 00
Birch, ₱ M	20 00@25 00
Hard Maple, ₱ M	25 00@30 00
Lath, ₱ M	2 50@ 2 75
Shingles, 1st, ₱ M	3 00@ 0 00
Shingles, 2nd, ₱ M	2 50@ 0 00

CORDWOOD.

Although the weather has been very severe most people had supplied themselves beforehand, so that the last two weeks the demand has been light, but prices are on the turn dearer and are likely to continue firm during the winter. We now quote prices from the wharves ex cartage as follows :—

Long Maple	$ 6 50
Short "	6 00
Long Birch	5 50
Long Beech	5 00
Tamarack	5 50

LIVERPOOL MARKETS.

Latest mail advices report imports as being fair but consumption not so large as during the previous month but on the whole satisfactory. Several cargoes of spruce deals from St. John, N. B., were sold at £6 15s. Quebec square white pine 1st class 2s. 5d. per cubic foot, and mixed quality 16d. per foot 50 feet average. Quebec red pine deals £6 10s. per standard. A number of cargoes of spruce deals had been offered at auction, but were all withdrawn with the exception of a parcel of Miramichi which averaged about £6 10s. 6d. per standard. Several of the foregoing cargoes have since been sold at private terms.

TORONTO.

From Our Own Correspondent.

DEC. 24.—There is no change in the condition of the trade here worthy of note, no move of any consequence will now be observable until after the opening of the new year. There is a feeling of confidence noticeable amongst the wholesale dealers in regard to the coming season's operations. The firm stand taken by the various banks not to loan money for stocking this winter, leads to the belief that not more than 50 per cent. of the usual stocks will be got in, therefore dealers believe they have a certain thing and a sure margin on the stocks now held. This feeling imparts a firmness in quotations which would have been impossible under any other conditions. All kinds of bill stuff especially remains firm at previous figures furnished you, and dealers do not feel like forcing their lumber on the market, feeling confident that the demand will shortly come fully up to the supply. Dealers in western Ontario are carrying extremely small stocks. The railway companies having so hampered the trade by the rigid system adopted of weighing all cars that they felt the time must shortly come when the companies would come down off their high horse and feel disposed to give their customers better terms, and in this they will not be mistaken, that time is now at hand, empty cars and silent engines is now the rule and not the exception, and railway freight agents are now inviting lumber dealers to confer with them on matters pertaining to the trade, which might have conduced to the interest of both parties if taken into consideration at a much earlier period.

The much vexed question anent the charge made for shunting by the N. & N. W. R. R. is also likely to receive a practical solution ere long, one of our prominent lumber firms having positively declined to pay this onerous charge, and it now remains to be seen if the company will dare try to collect by the only method available. I dare venture the assertion that they will do nothing of the kind, they will pluck all who tamely submit to the operation and those who are too plucky to be plucked will go scott free.

With the slackness of trade at the retail yards I find a feeling of dissatisfaction is prevalent amongst the retail dealers in consequence of the practice by wholesale men of selling to consumers by carload lots. This is a grievance which might well be discussed by the parties interested, but, like most questions, it has two sides. Before retailers are in a position to bring this matter to the front they must at the same time remedy the complants made by the wholesale dealers, and instead of purchasing direct from the manufacturer, deal exclusively with the middlemen, and in that case they in town could well afford to dispense with the trade done with the consumer.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
Scantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 50
Three uppers, Am. inspection	35 00@45 50

B. M.

1½-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ₱ M	3 00
Sawn Lath	2 50

WINNIPEG.

The Winnipeg *Commercial* of Dec. 18, says : There is very little demand at present, and until building operations are commenced next spring there will not be much movement. Quotations are as follows :—Pine lumber, 1st, common boards, dressed, $26.50 ; 2nd, dressed, $25.50 ; 1st, do rough, $26.50 ; 2nd, do., $25.50 ; sheathing, rough, $25 ; timber, 16 feet and under, $24 ; do. over 16 feet, for each additional 2 feet, $1 ; dimension and joists 16 feet and under, $24 ; do. over 16 feet for each $1 ; fencing, $25 ; 2 and 3 inch batttens, $30 : A. stock boards, all widths, $50 ; B. do., $45 ; C. do., $40 ; D. do., $35 ; 1st clear. 1, 1¼, 1½, and 2 in, $60 ; 2nd do. $56 ; window and door casings, $50 ; base boards, dressed, $50 ; 1st pine flooring, siding and ceiling $40 ; 2nd do $35 ; 3rd do., $30 ; ½ inch split siding, dressed, $30. Spruce lumber —timber 16 feet and under, $22 ; do. over 16 feet, for each additional 2 feet, $1 ; dimensions and joists, 16 feet and under, $23 ; do. over 16 feet, for each additional 2 feet, $1 ; boards, 22 ; 1st flooring, siding and ceiling, $28 ; XX shingles, $5.25 ; Star A shingles, $3.25 ; X shingles, $5.00 ; A do. $4.50 ; lath $4.50.

BOSTON.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

BUFFALO.

We quote cargo lots :—

Uppers	$46 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

CHICAGO.

The *Northwestern Lumberman* of Dec. 20th, says :—It is too soon after the shutting down of the mills of the North, and too near the beginning of the next year, for the lumber business of the country to take any new feature indicative of the future. Quietness and consideration prevail in every branch. Yard stocks are held at steady prices, the general opinion being that the lumber in sight is good for all the money that is asked for it. While there is no activity on the part of purchasers of bulk stocks, the holders of them at the mills evince no anxiety to crowd sales for future delivery by making concessions in price. The late cold snap has caused the shutting down of all the mills that cut white pine, excepting some of the railroad mills, and the stock for the season of 1883 is now in sight, so that calculations as to its amount can be reached. It is generally conceded that stocks are not excessive in the wholesale yard markets though they are ample for a good demand in future months. Dry stock is rather moderate, for the reason that consumption the past season has been active, and the supply has been constantly drawn down to a minimum.

There has been a complete cessation of arrivals by lake since the coming of severe cold weather. Early in the week Sinclair & Morris received a cargo of inch lumber, which sold for $14, and clssed as medium, running quite a percentage to fine common and better. Goodenow & Hinds had two cargoes of extra and clear shingles unsold on Thursday, which they held to be worth $3 and $2.70.

Quotations are as follows :—

Short dimension, green	$ 9 50@10 00
Long dimension, green	10 00@11 50
Boards and strips—No. 2	11 00@13 00
Boards and strips—Medium	13 00@16 00
Boards and strips—No. 1	16 00@21 00
Shingles, standard	2 00@ 2 10
Extra A	2 20@ 2 60
Lath	1 65@ 1 75

Receipts of lumber, shingles, etc., for the week ending Dec. 20, as reported by the Lumberman's Exchange :—

RECEIPTS.	*Lumber.*	*Shingles.*
1883	4,039,000	2,246,000
1882	3,446,000	1,167,000

FROM JANUARY 1, 1883, TO DECEMBER 20, 1883, INCLUSIVE,

RECEIPTS.	*Lumber.*	*Shingles.*
1883	1,835,145,000	1,138,260,000
1882	2,047,272,000	970,691,000
Increase		167,569,000
Decrease	212,127,000	

STOCK ON HAND DEC. 1.

	1883.	1882.	1881.
Lumber	682,771,984	719,458,412	620,718,223
Shingles	449,258,650	309,932,650	265,262,174
Lath	53,791,034	76,994,369	53,017,573
Pickets	2,366,681	3,967,920	2,346,682
Cedar posts	450,878	100,258	241,136

ALBANY.

Quotations at the yards are as follows :—

Pine, clear, ₱ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	45 00@50 00
Pine, good box	22 00@33 00
Pine, 10-in. plank, each	00 42@00 46
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 21
Pine, 10-in. boards, 16 ft., ₱ M	28 00@32 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	18 00@20 00
Pine, 1-in. siding, select	43 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ₱ M	40 00@43 00
Ash, second quality, ₱ M	25 00@30 00
Cherry, good, ₱ M	60 00@85 00
Cherry, common, ₱ M	25 00@35 00
Oak, good, ₱ M	40 00@43 00
Oak, second quality, ₱ M	20 00@25 00
Basswood, ₱ M	25 00@30 00
Hickory, ₱ M	40 00@40 00
Maple, Canada, ₱ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ₱ M	38 00@40 00
Shingles, shaved, pine, ₱ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 4 90
" clear, "	0 00@ 3 30
" cedar, mixed	0 00@ 3 50
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ₱ M	0 00@ 2 75
Lath, spruce, "	0 00@ 3 00

OSWEGO, N. Y.

From Our Own Correspondent.

No change to make in quotations ; trade is very dull, though assortments and stocks were never better. Dealers are anticipating a fair trade during the winter.

Three uppers	$45 00@46 00
Pickings	35 00@36 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	11 00@15 00
Mill run lots	15 00@20 00
Sidings, selected, 1 inch	30 00@35 00
1¼ inch	30 00@36 00
Mill run, 1x10, 12 inch	18 00@20 00
selected	22 00@26 00
Shippers	14 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	22 00@35 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 25@ 3 50
Lath	2 00@ 2 20

GLASGOW.

The *Timber Trades Journal* of Dec. 8, says : There have been few arrivals of wood goods here for the past week, and, from what can be learned, the import business of the season in the timber line is drawing to a close.

On 29th Nov., at Greenock, an auction sale of Canadian timber and deals was held, at which there was a fair attendance, and a good many lots disposed off at prices as noted below. Also on the 5th inst. a sale took place at Yorkhill Yards here, the catalogue comprising a varied assortment of woods, chiefly boards and deals, a portion of which was sold without reserve. There was a large attendance, but the rates indicated a weakness in the market meantime. Pine deals, 1st quality, of which there has been a moderate import, bring fair prices.

With reference to the reduction of wages in the Clyde shipyards, work in all the yards is going on as before the reduction was announced, and at present there are no signs of any interruption to this state of things. However, the change will be fully tested after the new year.

For the month of Nov. there has been activity on the Clyde in the latter stages of shipbuilding ; 36 vessels of an aggregate tonnage of 45,430 tons have been launched by the various firms on the river, as contrasted with November, 1882, 46,513 tons, and November 1881, 31,600 tons. The amount of work on hand, however, is now comparatively small, and firms have been obliged to reduce their establishments.

AUCTION SALES.

On 29th Nov., at Greenock, Messrs. Singleton, Dunn, & Co., brokers :—

	Per cub ft.
Quebec waney boardwood—	
70 cub. ft. av. per log	2s. 3d.
Do. yellow pine (superior)—	
50 cub. ft. av. per log	1s. 6½d.
Do. birch—	
13½ " " "	1s 8½d.
Do. Sycamore—	
35½ " " "	1s. 3d.
Do. round hickory—	
17 cub. ft. " "	1s. 7½d.
Pitch pine planks—	
3, 4 and 5 in. thick	11d.
Quebec 1st yellow pine deals—	
11 to 14 ft. 7/21×3	2s. 3½d.
10 " 7/22×3	2s. 4d.
12 " 7/10×3	2s. 3d.
9 " 6/19×3	2s. 2d.
Do. 1st. yellow pine deals—	
6 to 8 ft 7/17×3	2s. 1d.
Do. 3rd yellow pine deals—	
12 ft. 11/24×3	1s. 1d.
13 " 11×3	10½d. to 11½d.
13 to 16 " 11×3	11½d.
10 " 12 " 11×3	11d. & 11½d.
14 " 16 " 7/23×3	1s. & 1s. 0½d.
12 " 16 " 7/18×3	11d.
9 " 11 " 7/20×3	10½d. & 10¾d.
12 & 13 " 6/10×3	10¾d.
Do. 3rd yellow pine ends—	
6 to 8 ft. 11×3	10d.
Do. 1st spruce deals—	
9 ft 7/11×3	1s. 0½d.
Do. 1st. spruce deal ends—	
6 to 8 ft 7/11×3	1s.
Do. 4th spruce deals—	
10 & 11 ft. 7/14×3	8½d.
Do. spruce planks—	
9 to 17 ft. 6/11×2	9d. & 8¾d.

LONDON.

The *Timber Trades Journal* of Dec. 8, says ; We hoped ere this to have had to record an upward tendency in the market, and with such a good harvest after a long interregnum of low values, it was pardonable to be somwhat sanguine as to a favorable reaction, but other things did not fit in, and the fall in the autumn freights assisted as much as anything in keeping the market at its present low ebb. There has been

a very large business done throughout the season, and every day that brings us nearer to its close shortens the interval between now and when values will begin to strengthen ; nor will the strong indications of winter we have just experienced be any disadvantage to the trade.

LIVERPOOL.

The *Timber Trades Journal* of Dec. 8, says: The steady demand which has for some time past characterized the course of this market is beginning to show signs, by the reduced deliveries, that the year is rapidly coming to a close, and until we find ourselves in the second half of next January it is not probable that we will find any marked animation in business. Fortunately the agitation in the labour market, which has been recently impending in the coal and cotton trade, appears to be subsiding, and this in a measure will tend to give a degree of confidence in the future which was not apparent a fortnight ago.

There is still no change to report in market prices, which, taken all around, remain low; but with the close of the season, now immenent, it is probable a firmer tone will soon exhibit itself.

The table of stocks on hand at the end of the last month, together with the imports and consumption, is given herewith.

No public sales have taken place since our last issue, nor is it likely there will be many during the remainder of this year unless something should come forward under special circumstances, or some arrivals which might go to make up an attractive auction.

The Cantilever Bridge.

BUFFALO, Dec. 20.—The new cantilever bridge at Niagara Falls was thoroughly tested this afternoon. Large crowds occupied every available spot from which a view of the proceedings could be obtained. At nine o'clock eight heavy locomotives passed over the structure. At twelve, twenty locomotives crossed the bridge while observations were made about every fifteen feet. No official declaration has as yet been made, but the test has been considered perfect and the bridge thoroughly satisfactory. At three o'clock an elegant repast was served at the Monteagle Hotel at the Suspension Bridge by a Rochester caterer. Provision had been made for 600, but fully 1,000 persons helped to make away with the dinner. The repast cost over $1,000. After dinner the gathering was called to order. Mr. Carter Harrison, Mayor of Chicago, made a vigorous speech, in which he congratulated Canada and the United States on the completion of the splendid structure. General Field, president of the Central Bridge Works, which built the bridge, was loudly called for. He simply said: "I'm not a speech-maker, I'm a bridge builder."

Trade Healthy

The monetary *Times* says:—There is really no ground for general despondencey. Canadia as many and various interests now, and some of them are in a wholesome and sound condition. The various branches of our importing trade are healthy, as a whole, payments from the interior continue remarkably good. Bills are well met at the banks. Few renewals are asked; purchases are made prudently; credit is given with reasonable caution. Neither in the wholesale nor retail trade is there any general reason for complaint.

Internal use of Hot Water.

The number of invalids, semi-invalids, and those in fair health, who sip hot water in the morning of each day, is astonishingly large. The habit has become suddenly fashionable; and, if we had no worse fashions to complain of, the world would be vastly improved. Still, however beneficial the free employment of hot water may be to some, it is not an agent which can be indiscreetly used without harmful effects. The employment of hot water for internal use originated in this country; and so eminent a medical authority as the London *Lancet* speaks of it as a "valuable American contribution to medicine." Dr. Salisbury of Cleveland claims to have been the first to suggest its use, and it is probable that his claim is well founded. Hot water is at present used very much at random, and but little is popularly known regarding the proper and safe methods of its employment. The questions relating to the proper times of administration, the number of ounces to be swallowed (both at meals and in the intervals between), and the temperature, are very important, and should be well considered. The therapeutical uses of hot water may be varied; but it would seem that its beneficial employment is pretty well established in those diseases arising from unhealthy alimentation. In these affections the stomach and bowels become distended and obstructed by the abnormal acetic, butyric, hydrosulphuric, lactic and saccharic acid fermentations; and the idea is to wash away these offending matters, and thus aid in introducing normal functional action. Cold water is in most cases inadmissable, as it is apt to produce distress in sensitive stomachs, as has been stated in a former article. Hot water is well borne in most cases; but it must not be lukewarm it must be *hot*. And here is a distinction it is well to observe.

Tepid water, if taken in considerable quantities, will sometimes produce vomiting; but, if the water be raised to attemperature of from 100° to 150° F., it produces downward movements of the bowels' instead of upward. Tea as drunk by dyspeptic tea-drinkers is preferred at a temperature of about 120° F., and this docoction at this temperature affords great relief to persons of weak stomachs. The demand by dyspeptics for tea "hot and weak" is founded on observation that in this form it affords genuine relief. If the tea-leaves were left out altogether, the agreeable relief would follow from the use of the hot water with a little milk and sugar added. By hot water is meant water which is so warm that it can only be sipped slowly, and not poured into the stomach as a draught. In the absence of a thermometer, the proper temperature may be determined by the efforts upon the tongue and fauces: it must not be "scalding hot," but so warm as to be swallowed without inconvenience or danger.

As regards quantity, no fixed rule can be given. Perhaps half a pint may be regarded as a minimum, and a pint and a half, a maximum quantity, to be taken at one time. The object being mainly to wash out the alinentary canal, carrying down the slime, yeast, and bile through normal channels, a few ounces can have but little effect in accomplishing such results. It is assumed that the liver and kidneys are greatly influenced by the hot water treatment, and that they are *washed* as well as the intestinal canal; the bile being eliminated through the bowels, and not through the blood, *via* the kidneys.

The best time to use hot water is probably about one hour before meals, and, in some instances, half an hour before retiring to bed. The most important time of all, however, is the hour before breakfast in the morning. The digestive apparatus of the weak and morbid needs *cleansing* after a night of rest—or unrest as in the case of invalids. A half or whole pint of hot water taken upon getting out of bed in the morning will in most instances soon break up morbid conditions of the bowels; and natural peristaltic motions will be established even in obstinate cases.

It may be necessary, in some instance, to medicate the water slightly, and thus improve its taste, and add to its activity. A few drops of tincture of ginger, a half-teaspoonful of tartrate of soda, or sulphate of magnesia, are unobjectionable adjuncts to the water, and indeed sometimes are necessary. The practice of using hot water may continue as long as it is found to give relief, and as long as it contributes to the establishment of "inward cleanliness," and consequent robust health. Those in sound condition may use hot water with advantage occasionally throughout life.—*Popular Science News.*

FOR A HARD COLD, with pain in the head, bones or through the chest, take Down's Elixir at once and in liberal doses, cover up well in bed, and your cold or ill will soon be well.

HOW TO TREAT WEAK LUNGS.—Always breathe through the nose, keeping the mouth closed as much as possible. Walk and sit erect, exercise in the open air, keep the skin scrupulously clean, and take Hagyard's Pectoral Balsam for coughs, colds, and bronchial troubles.

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LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on Nov. 30th, 1882 and 1883, and also the Consumption for the month of Nov. 1882 and 1883 :—

	Stock, Dec. 1st. 1883.	Stock, Dec. 1st. 1882.	Consumption for the month of Nov., 1883.	Consumption for the month of Nov., 1882.
Quebec Square Pine	464,000 ft.	381,000 ft.	241,000 ft.	182,000 ft.
" Waney Board	402,000 "	271,000 "		
St. John Pine	46,000 "	5,000 "	42,000 "	99,000 "
Other Ports Pine	94,000 "	66,000 "	8,000 "	12,000 "
Red Pine	47,000 "	68,000 "	31,000 "	3,000 "
Pitch Pine, hewn	362,000 "	701,000 "	50,000 "	95,000 "
" Sawn	566,000 "	526,000 "	201,000 "	66,000 "
Planks	68,000 "	90,000 "	28,000 "	2,000 "
Dantzic, &c., Fir	116,000 "	38,000 "	7,000 "	9,000 "
Sweden and Norway Fir	110,000 "	21,000 "	15,000 "	9,000
Oak, Canadian and American	324,000 "	341,000 "	71,000 "	63,000 "
" Planks	178,000 "	137,000 "	53,000 "	52,000 "
" Baltic	21,000 "	42,000 "	9,000 "	2,000 "
Elm	17,000 "	48,000 "	15,000 "	32,000 "
Ash	28,000 "	15,000 "	1,000 "	10,000 "
Birch	121,000 "	66,000 "	89,000 "	48,000 "
East India Teak	37,000 "	20,000 "	2,000 "	4,000 "
Greenheart	112,000 "	138,000 "	14,000 "	3,000 "
N. B. & N. S. Spruce Deals	23,942 stds.	16,806 stds.	8,042 stds.	8,476 stds
" Pine "	1,240 "	810 "		
Quebec Pine & Spruce Deals	9,224 "	8,058 "	4,008 "	2,975 "
Baltic Red Deals, &c	5,205 "	4,630 "	1,062 "	392 "
Baltic Boards	263 "	568 "	28 "	196 "
" prepared Flooring	3,600 "	2,718 "	303 "	816 "

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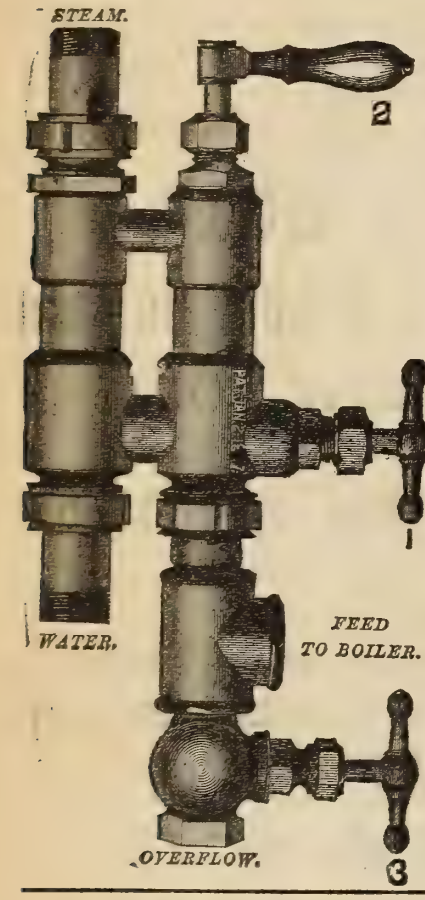
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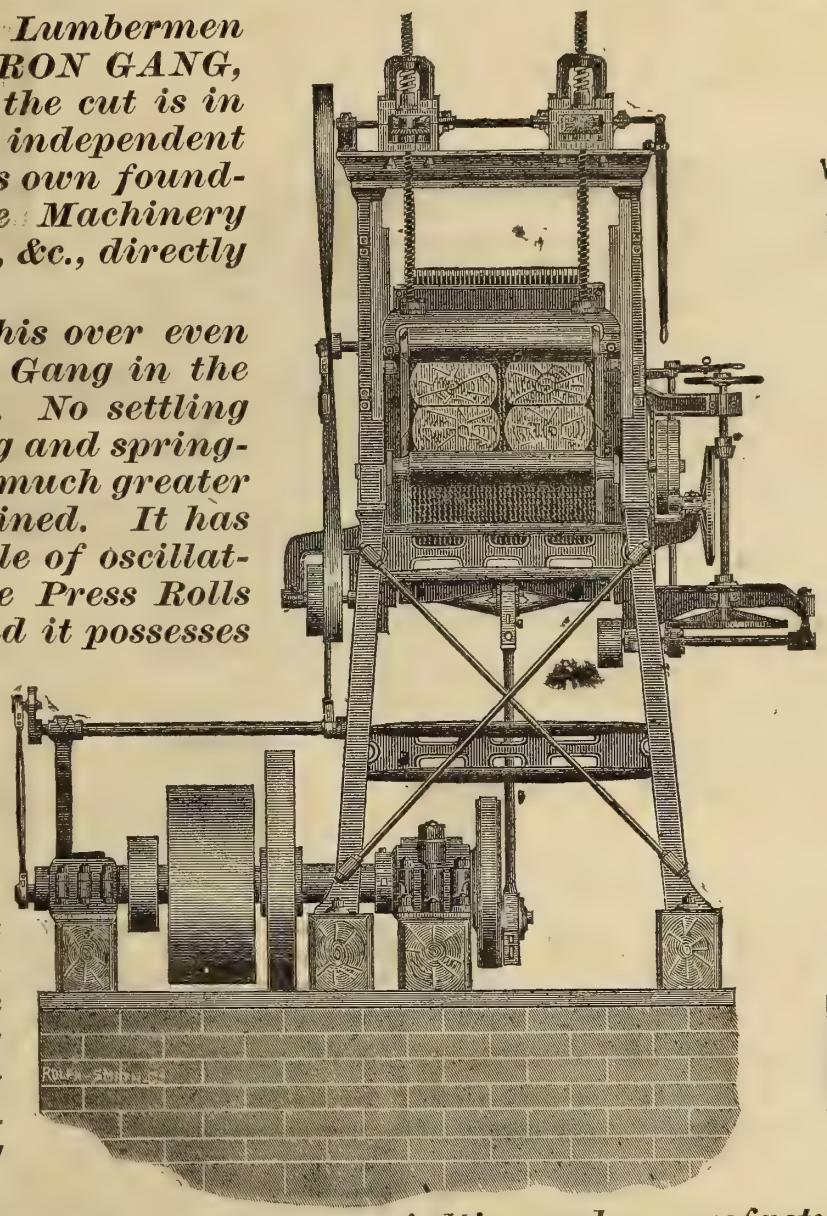
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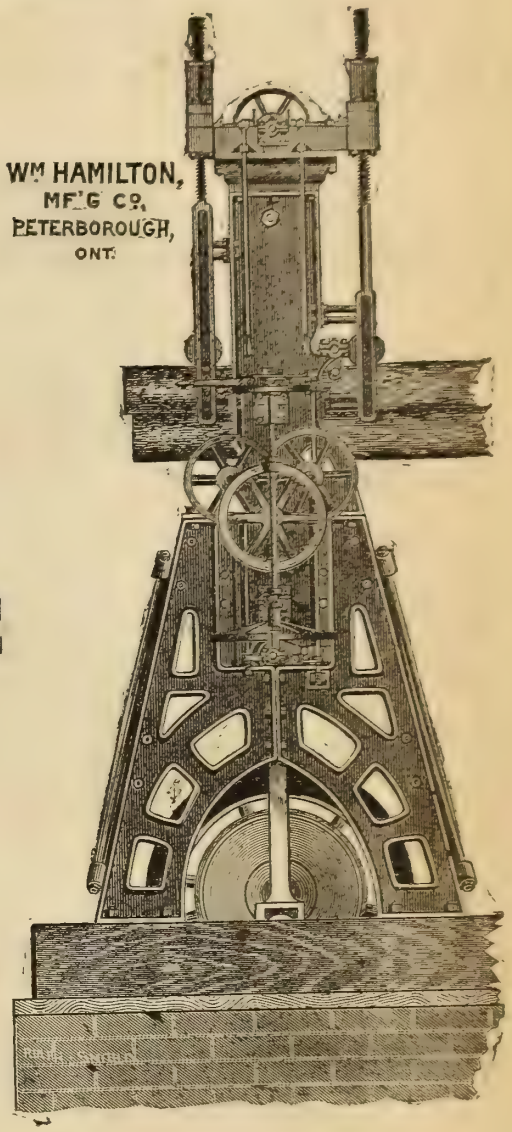
Saw Mills and General Machinery

PETERBOROUGH, - - - ONTARIO.

We introduce to the Lumbermen of Canada our New IRON GANG, which will be seen by the cut is in itself a complete and independent Machine, resting on its own foundations, having all the Machinery for operating, feeding, &c., directly attached.

The advantage of this over even a well built ordinary Gang in the mill frame is evident. No settling out of line, no yielding and springing of timber, while a much greater working speed is obtained. It has the most improved style of oscillating motion, it has the Press Rolls operated by power, and it possesses generally all the good features of best American Gangs, with heavier frame work and heavier shafting, all with a view to rapid, steady & correct working. A good look at one of these massive machines satisfies the sawmill man that they are in every way capable of continuously performing heavy duty throughout the season.

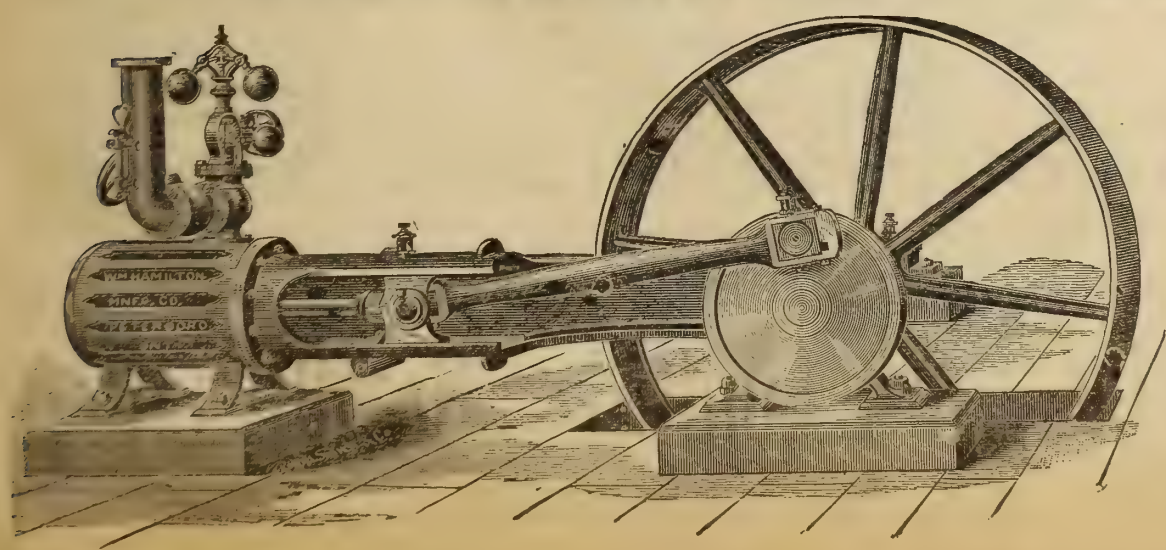




☞ *We make these Gangs one of our specialties and manufacture them of different sizes.*

—ALSO—

ENGINES AND BOILERS.



This cut represents our **SAW MILL ENGINE**, of which we make the following our Standard sizes, 12x16, 16x20, 18x24, and 24x30, built Strong and Substantial for Heavy Work. The Piston Rod, Cross-head Pin, and Wrist Pin, are made heavy and of the best steel; the Connecting Rod has solid ends and is tightened up by screw and wedge, avoiding all danger of keys getting out; the Slide Valve has a simple balance valve, requiring no attention from the Engineer, as it is self-adjusting. The Engine Shaft and Fly Wheel made very heavy. Belt Pulleys put on when required in place of Fly Wheel, and all regulated by the Judson Governor.

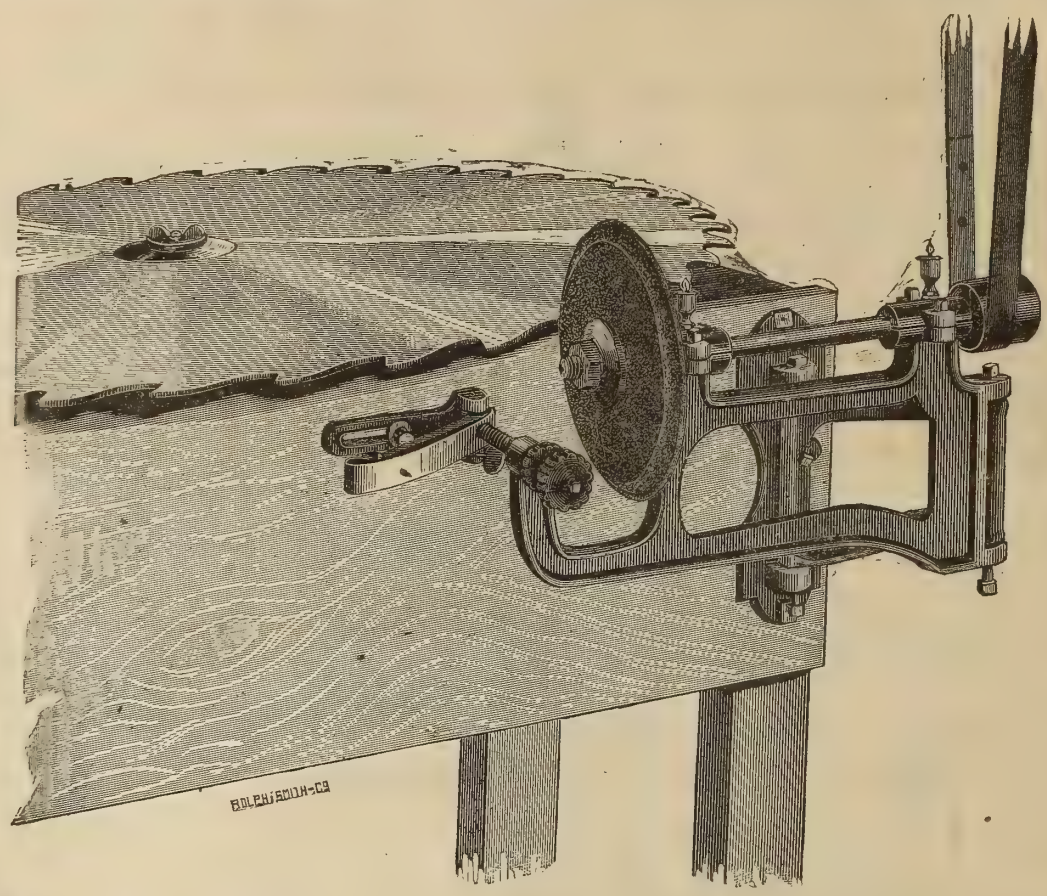
ROGERS' PATENT
SAW GUMMER and SHARPENER

The Handiest Machine for these purposes ever Invented.

Don't Heat!

Cheap!

Very Simple!



Accurate!

Works Fast!

Complete!

Lumbering Season, 1884

Saw Mill Owners in providing for the season of 1884, ought not to lose sight of ROGERS' SAW GUMMER for it will save them more money in proportion to the amount invested than any other machine.

Only $30, including Emery Wheel; Table and Countershaft, $10 extra.

A few of ROGERS' SAW GUMMERS were put on the market last season, and we quote some of the commendations received:

JA. ADDEN, Foxmead, says:—
"Your machine is all I expected."

CHAS. ANDERSON, Anton Mills, says:—
"I have given it a good trial, and am well pleased with it. I find it is one of the indispensables in a saw mill." * *

ROBT. R. WEIR, Orillia, writes:—
"It works like a charm, and is very accurate in its work."

CRONE & PATTON, Hoc Roc Mills, Gravenhurst, says:
"The Rogers' Saw Gummer purchased from you gives good satisfaction, * * it cannot be beat."

D. DAVIDSON, Pentanguishene, writes:—
"We are well pleased with the Gummer."

W. W. BELDING, Wyevale, writes:—
"I have the Gummer running and it is giving good satisfaction."

ADDRESS ALL ORDERS TO THE

Hart Emery Wheel Company, Limited - Hamilton, Ont.

☞Manufacturers of Hart's Celebrated Patent Wire Strengthened Emery and Corundum Wheels.

—IT WILL PAY YOU—

TO SUBSCRIBE

FOR THE

Canada Lumberman

FOR THE FOLLOWING REASONS:

1. It is the only newspaper published in the Dominion of Canada devoted to the lumber and timber industries.
2. It is devoted to the development and utilization of our forest wealth.
3. It furnishes complete and reliable quotations of prices of lumber in all the leading markets.
4. Its columns are filled with interesting reading matter, valuable alike to the land owner, manufacturer or dealer.
5. It costs only $2.00 per year to have it sent, post-paid, to any address in Canada, and no land owner, lumber dealer, manufacturer or individual in any way connected with timber industries, can afford to do without it.

☞TO ADVERTISERS.

It has a circulation among saw mill owners, manufacturers, lumber and timber dealers and all classes connected with the timber business.

Examine the field, count the cost, and you will at once decide that the CANADA LUMBERMAN is the

——CHEAPEST, BEST, MOST RELIABLE and ONLY TRUE MEDIUM——

for placing your goods or wares before the saw mill men and lumber and timber dealers of the Dominion

WATEROUS ENGINE WORKS, BRANTFORD

SOLE CANADIAN REPRESENTATIVES OF

GANDY'S

Made in 4, 6, 8 and 10 Ply Thickness.

Any Length without joint.

Endless, if desired.

Any Width to 60 inches.

Four Ply is as cheap as good leather belting, stronger, runs truer, does not stretch, is not effected by heat or moisture.

PATENT COTTON BELTING

SPECIALLY SUITED FOR MAIN DRIVING

☞ *A SUBSTANTIAL GUARANTEE GIVEN WITH EVERY*

MAIN DRIVING BELT

THE BEST MAIN DRIVING BELT IN EXISTENCE! *Send for sample and quotations, stating work belt has to do. Replace all troublesome belts with the GANDY.*

SOLID WOVEN COTTON BELTING, also kept in Stock.

EWART LINK BELTING, for Elevators, Conveyors, &c. Send for Catalogue.

AMERICAN SAWS!

☞ *SAVE YOUR TIMBER*

By using THIN SAWS!

16 Horse-Power Sawmill, driving a 48-in. 10-Gauge Trenton Saw.

GEORGE A. DOUGHERTY writes from Leamington, Ont., 12th May, 1883:

Gentlemen,—I would say that my 16 horse-power Champion Engine drives the thin saw, 48 inches in diameter, 8 and 10 gauge, with 40 teeth, (No. 2 Trenton short teeth), admirably. Our speed is 360 revolutions of the saw per minute. We have sawn over 50,000 feet of white ash in ten days; often having to stop on account of belt breaking; never hurrying at all, but taking great pains to saw the lumber to the best advantage; nor did we commence before seven a.m. or work after six p.m. During this time the saw has not made one bad run, or spoiled one foot of lumber, or once been hot. In maple, black ash or elm, I can, without pressing matters at all, cut 600 feet per hour into inch boards. One half day, running from eight a.m. till 12 noon, we sawed bill stuff, 1 in. x 12 in. and 2 in. x 4 in., 12 feet long; and joists 2 in. x 5 in. and 2 in. x 7 in., 22 feet long, making no effort to work fast, yet we cut 3,053. When cutting into inch lumber, we save at least 1,000 feet in every 16,000; besides, we cut more than when using the 6 and 7 gauge to amount to at least $5.00 per day for sawing. If our belt could stand it, we could run most of our time on 3½ inch feed. I think I would have no difficulty in running a 10x12 gauge.

9-Gauge Damascus Tempered Saw gives best of Satisfaction.

A. CALDWELL & SON write from Almonte, 12th June, 1883:

The saw we got from you recently (60-inch solid 8 and 9 gauge 60 teeth Emerson Damascus tempered saw) is giving the best of satisfaction, and is undoubtedly a great saving of lumber compared with the heavy gauge saws we used last summer, and runs with less strain on our engine, it being rather too small for the work it has to do. Send us by express a new Dominion Gummer and an Elliott 1880 Lacecutter.

Damascus Tempered 60-in. 10-Gauge Saw on 6-in. Feed.

RALPH MATHER writes from Ruscom, Ont., May 14th, 1883:

I have yours of the 10th inst., and in reply would say, that the 60-inch 10 gauge solid saw I bought from you gives every satisfaction. The inserted tooth saw I have is gauge 5. The new saw cuts nearly an ⅛ less kerf, and saves about 1,000 in 10,000; makes better lumber, and runs with one-third less power. Where a high and uniform speed can be obtained, a good sawyer will have no trouble with one of the same size as thin as gauge 12 at the edge. I feed this one as high as 6 inches to each revolution in sycamore.

50-in. Lumberman's Clipper 10-Gauge Saw.

SIMON PROCTOR, sawyer and manager for W. C. V. Hall & Co., Quebec, writes from Lyster Station, Quebec, November 19, 1883:

The Lumberman's Clipper, 50-inch Saw that I ordered from you is giving the best possible satisfaction. I have been running it six weeks in large **Rough Twisty Spruce Logs**, and must say it does better work than any other saw I have ever run, and it takes less power to drive it than any saw of same size with less teeth and thicker blade. I run it on one of your 30 horse-power Portable Mills—Locomotive Boiler—and have cut 50 logs with it without using a wrench on either arbour or guides, without filing, and never made a bad board, all inside of four and a half hours. You need not be afraid to recommend that kind of a saw to your customers.

Send for Sawyers' Hand Book; Illustrated Saw Circular; Large Lithograph to hang in your Mill.

Waterous Engine Works Company, Brantford, Canada

THE CANADA LUMBERMAN

AND MILLERS' MANUFACTURER AND MINERS GAZETTE.

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM

VOL. 4. PETERBOROUGH, ONT., JANUARY 15, 1884. NO. 2.

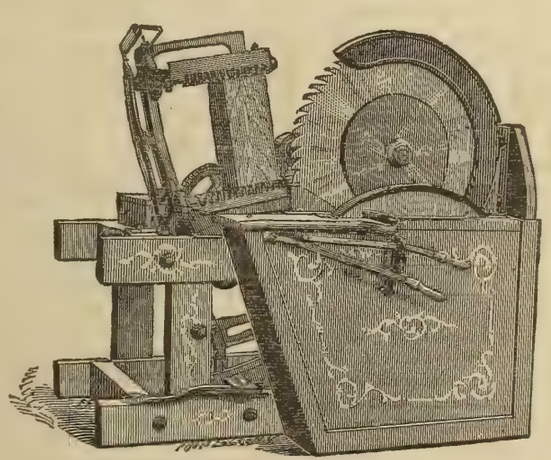
HODSON'S SHINGLE MACHINE.

The manufacture of shingles has become an important interest in Canada, the value of the annual product, as given in the last census, being $766,998, and the present rapid development of the country will create a still larger demand. Under these circumstances lumbermen will be deeply interested in any improvement in machinery used in their manufacture, and we invite their attention to a shingle machine recently brought out by Mr. T. Hodgson, of Amherst, N. S., a cut of which is shown at the head of this article. It is heavy and substantially built, the ironwork weighing nearly 1,100 pounds, and the whole machine 1,550. The frame, which is made of well seasoned hardwood, is heavy, and securely put together with bolts, and carries not only the shingle machine proper, but also the jointer which is driven by a belt from the saw arbor. The whole machine when it leaves the shop is put together and ready for work, except putting on the belts and filing and setting the saw. It can be belted from above or below, or from either end, and requires no fastening of any kind to the building in which it stands, except a light cleat nailed to the floor at the end of the machine towards the driving shaft.

The carriage is pivoted on a stout iron stud near the floor, the upper part of it being kept steady in its movement to and from the saw by slides working on a planed iron guide plate, a segment of a circle, bolted to the upper part of the frame, an arrangement that secures a rigid and yet free motion to the carriage. The set rolls are made each of a single piece of cast steel. The frame carrying the upper set roll is held between the sides of the carriage by a rod passing through them and through lugs on the rear part of the frame, allowing the front of the frame, with the set roll, to rise to put in a bolt, and to fall to hold it in place. There is a weighted lever at the foot of the carriage, and from it a link, hidden in the cut by the shingle bolt, extends up to the frame carrying the upper set roll, so that the weight, operating through the lever and through this link exerts a heavy pressure on the set roll, and grasps the bolt with such force that it is impossible for it to work loose. To put in a bolt the operator places his foot on a lever seen near the floor, the other end of which extends under the weighted lever. This raises the weighted lever, and with it the upper set roll, leaving him both hands free to handle the bolt. When it is in place he lifts his foot and the set roll comes down with a force that grips the bolt like a vise. The value of this device will be better understood when we say that the carriage can be stopped, the old bolt taken out, a new one put in, and the carriage started *in five seconds.* The bearings of the set rolls are large and long, and a constant and even pressure on them is obtained by means of vulcanized rubber springs. The set gear is very accurate and reliable, and not liable to get out of order, and the feed gear, which is driven from a cone pulley on the edger arbor, is of the same character.

The saw which is 36 in diameter, is tapered from guage 10 at the collar to 14, 15, or 16, as may be required at the rim, and is stiffened by a collar 20 in. in diameter, to which it is fastened with screws. The saw and collar can be taken from the arbor to grind, or to use one saw while another is filed. A strong iron guard covers the back and top of the saw to prevent accident.

The jointer, as shown in the cut, is placed within a few inches of the saw so that the operator has not to turn around with each shingle, but can be jointing one and throwing it away with the left hand while he is taking the next from the saw with the right. This is a valuable feature, enabling the operator to joint a great many more shingles than is possible with the jointer placed in the usual manner.



HODSON'S SHINGLE MACHINE.

One of the hand levers shown on the front of machine throws the feed into and out of gear, and the other regulates the distance that the carriage runs. If the bolt in the carriage is a large one the handle is placed in the highest notch and the carriage traverses its whole distance, but if the block is smaller the handle is put down one or more notches and this causes the carriage to run just far enough to cut whatever sized bolt is in it, and no farther. The run of the carriage is often changed once or twice in cutting the same bolt, as the change is made in a moment, and while the machine is in its work. This device is a great saving of time over those machines that use the lever feed and other modifications of the crank motion, in which the run of the carriage is always the same, be the bolt large or small.

The bearings are very large and long, and are lined with the best Babbitt metal, those of the saw arbor being self oiling. All of the running parts are carefully balanced, and the saw can be run at 1,700 to 1,800 without a jar. As the carriage is steady in its movement, and as the saw is well supported by its large collar it is capable of carrying a heavy feed, and of runing at a high speed, which, with the devices already described for keeping the saw constantly in its work, gives the machine a very large capacity. One of them owned by Messrs. B. Young & Co., of River Hebert, N. S., cut 1931 M inside of three months, the cut of the day shift running from 18 to 22½ M., one man putting in the bolts and jointing the shingles, and three men constituting the whole gang. For further particulars as to price, probable freight to any point, &c., address the inventor and patentee, T. Hodgson, Amherst, N. S.

PITCH PINE.

At the Gulf of Florida pitch pine ports stocks are stated to be only nominal, there being next to nothing available. At some of the places the drought is quite alarming, notably Mobile and neighborhood, where drinking water is so scarce that the inhabitants were paying 25 cents a bucket for that essential of life. All over the country the water in the rivers was very scanty, and the rafts had to broken up, the timber being floated down to the loading ports in single pieces. Some of the rivers were completely dry, and the logs consequently had to be brought down by rail or wagon, which would add very considerably to the cost. In consequence of this state of things fewer cargoes will be coming forward, and prices are already firmer, with an advancing tendency.

Of course a plentiful supply of rain, such as often happens in those latitudes, would materially alter the present prospect, but without some such assistance prices will not only continue to rise, but we understand there will be a difficulty in finding cargoes for the ships already chartered.

The supplies in hand here in London, which at one time were, in deals, especially, far in excess of the demand, under present circumstances will happen rather fortunately for those who deal largely in wood of this kind, and the low prices recorded a sale or two since will probably be materially altered the next occasion when similar goods come on the market.

There is, however, as already stated, the probability of heavy rains making the means of transport easy, and this contingency will doubtless prevent pitch pine values from reaching very extravagant proportions.

Under the most favorable conditions, it must be a long time before the logs hung up by the drought can be got forward, and though the rivers should be swollen with water, the time already lost must necessarily retard the shipments from all points; therefore the prospect for prices is highly favorable.

It seems only the other day the trade were lamenting the heavy stocks here of pitch pine as depressing prices, but if the reports from the southern ports are substantiated by later advices, the supply in hand will all be wanted to meet the requirements of consumers.—*Timber Trades Journal.*

A Thousand Year Old Bridge.

Engineers at Mayence have found the remains of the bridge that Charlemagne built on the Rhine near the close of the eighth century and have already removed over over 50 of the piles, from 15 to 18 feet long, on which it rested. The timber is so well preserved that it is still fit for building purposes, while the iron that was riveted to the piles has only a thin coat of rust to show the lapse of more than a thousand years.

THE London *Free Press* says a letter writer is informed that the firm in Quebec which has made the most money this year in wood is one which sends a member to South Africa, who goes from place to place picking up small orders, which have been shipped, so Quebecers say, at prices which have been made the business a small bonanza for the firm. Enterprise brings its own reward, always. Quebec would not be the "sleepy hollow" it is were its citizens generally more enterprising.

FORESTRY.

SIR,—Perhaps you will allow me the use of your widely circulated journal on a topic not uninteresting to many who view with concern the too complete disforesting of older settled Ontario.

At present, according to much correspondence I receive on the subject, very many of our farms have no forest left; while a great number have but few acres. In many neighborhoods the average is not more than ten acres of bush to the hundred, and while of course other sections have much more, the axe is ever at work, and the small average first mentioned will probably soon be that of a very large portion of our country indeed. One farmer is apt to think his bush will last his time, another thinks he will clear his and buy wood of his neighbour, a third that he will chop down his and use coal. Very many admit that it's a pity the woods are going so fast, but think that unless some general effort were being made to preserve them their own individual assistance can effect little, so that they themselves might as well chop down nearly their last ten acres which is in wood and might grow wheat.

A letter writer in your columns lately was kind enough to desire an article on political economy from my "ready and facile pen," instead of a long dissertation on trees, which he thought of lesser consequence. I must decline his request and disagree with his estimate. I get half a dozen such long dissertations by post every morning, and always wish them longer and more of them. Let me here take this opportunity of thanking my correspondents for the interest add trouble they take.

There are notes of warning in these letters it might be well to re-echo. Some farmers who, out of wood, are using coal, find the annual bill greater and the comfort less than they anticipated. Some complain that over clearing now exposes them to wintry tempests, severe to cattle and consumptive of fodder, blowing the snowy covering of the winter wheat from the centre to the sides of the field, freezing out some portions of the crop and drowning others, rendering all human life less comfortable, and that of the drift-impeded traveller peculiarly so. Many, too, state that in consequence of the same operation the living springs on the farms—once their greatest comfort and satisfaction—are fast drying up.

The Ontario Tree-planting Act of last session is being adopted in many sections, and the resultant lines of trees will do much to provide wind-breaks, but they will not provide timber. The roadside wind-break grows well, indeed—densely branching of head, and excellent of shade—but the forest is the genial birth place of the forest tree, which, drawn upward by he forcing process of its own attempts to reach the light above the high, overshadowing foliage, rises rapidly, tall, straight, and almost branchless, till you will often see healthy and beautiful young trees sixty or seventy feet in height, while but five or six inches through at the ground. These tall columns, then, in a few years enlarge into your barn timber, your cord-wood, your rails-cuts, your anything that the forest will give you. But the tree of the roadside would never have done this

There are yet small patches of timber dotted over the whole of Ontario, and every one of these, or a portion of them would form an excellent nursery for forest re-production. It is but a small matter, it is but, if it could be done, to induce farmers to fence in and utterly exclude cattle from a portion of their woodlands, and a young growth will presently cover the soil. Though every leaflet be now bitten to the ground, in four years you will have a miniature forest, perhaps a couple of yards in height—little basswoods with trunks of red and olive, small beeches, white and blue. black ashes, now beautiful stems of yellow grey, white oaks, now rods of mottled whalebone, elm, hickory, maple, and many another one, all crowding together, emulously rising to the light above. These also preserve the older forest, for at the edge these trees will be like those of the roadside, grown in the sun, immovable by the wind, and acting as wind-breaks to the inner trees.

For the continuance of the forest in a re-productive state, the presence of this undergrowth is absolutely necessary. Without it, grass gets in, overspreads the earth, injures the larger trees and prevents the growth of any smaller ones. The drying winds sweep through the bush, the roots are loosened, the soil appears to shrink from them, and many trees fall. There is no more vivid contrast than that of a piece of forest left unfenced, and another better protected. I had opportunities lately of seeing many such as they stood side by side. On one side of the fence all was in the bright strength of fervid life, everywhere the small buds of infant saplings just rising from the earth, above them the interspersing underwood, high above them many a magnificent tree, old and ready for the axe, and many a younger one closely at hand to replace them. But all had an air of health and of brightening verdure. On the other side of the fence the leaf-stewn soil was bare of vegetation, every earth-springing leaflet had been destroyed, the wind whistled shrilly over the denuded ground and among the moss-covered trunks of the old trees; for there was nothing but old trees; no young ones had grown to replace them, and they, themselves, the earth below them deprived of their natural covering, seemed sickly and many of them tottering to their fall.

If every farmer could be induced to preserve rigidly in forest but ten acres of his hundred, besides what bush (it need not be much) he wishes for his cattle, the good resulting to himself and to the country would be incalculable; for a few acres of dense forest thickly undergrown holds and distributes much moisture, and is of more climatic benefit, especially to the surrounding farms, than a far greater surface of woodland dried up and impoverished by the destruction of its undergrowth. For his own benefit, too, and that of his successors, especially in the too probably coming scarcity of timber, it should be remembered that this patch will yield a valuable amount yearly of timber of many descriptions which may be taken from it, tree by tree, as needed, and yet the remaining bush be all the better.

Yet, in the face of this knowledge, we find many farmers, instead of preserving, destroying their last patch. In this state of affairs it is probable that legislative aid could do much. It is indeed the farmer's own interest to preserve a portion of the forest, but he is apt to think that the principal benefits to be obtained can only be secured by the co-operation of many individuals—a co-operation which legislation, even if only permissive, would give him.

Let us think of the manner in which this might be secured, A suggestion has been made that a Government enactment might permit any farmer to say to the assessor, "I intend to fence and keep cattle from this piece of bush, five, ten, fifteen acres or so, as he might choose." Let it be then the duty of the assessor to look at this portion every year. As long as it is properly fenced and cattle excluded let that portion be free of taxes; but if the farmer choose to cease preserving it, or to chop it down, let it be understood that he is to pay the back taxes which were remitted to him. As years passed on each owner of such a portion would find himself bound under penalty of a considerable sum, to preserve the portion properly, and yet he could by no means grumble, for he would actually have received the money. He would in fact have accepted a certain amount on condition that he should do himself good with it.

This would, of course, slightly reduce the amount of assessable property in each township, but nobody would, at this day, object; in fact everyone who understands the matter would be well pleased if the Government had reserved some timber land in this township for this very purpose, which reserved land would not have been assessable. Then, in the newer and better forested sections, the assessment on wild land is light; while in the older counties, nearly at the end of their timber (for how they could replace their barns, many people write to me they do not know), the benefits resulting would almost immediately be very great. We should shortly have on every farm, a reservation closely resembling the original forest, retentive of moisture, prolific of timber, and of great climatic benefit to the country at large.

These reservations would answer another purpose, which would please many who remember former Ontario, who like life in a landscape, and do not care to see the country becoming destitute of every untamed thing, game, and many birds beneficial to the farmer would live there, a thing which, in the absence of undergrowth, but few of them can do.

I would be much obliged if any persons throughout the country would write me their views concerning the suggestion, or any changes they think might profitably be made in it, and I would be much gratified to see the subject discussed at the various county councils, as I intend shortly to take the liberty of asking the various county authorities their opinion in the matter.

R. W. PHIPPS,

233 Richmond street West, Toronto, Jan. 3.

HOW A BOAT WAS BUILT

Last summer Captain James Smith, for some years in command of the Saskatchewan steamer Lily, was sent to Fort Chippewyan to superintend the construction of a steamer suitable for the navigation of the inland waters, and the result of his labors is the boat now under notice. Her dimensions are as follows: Length, 130 feet; breadth 24 feet; draft when wooded up for a trip, 15 inches. She is propelled by a pair of first-class engines of sixty-five horse-power, of the same pattern as those of the Marquis which runs on the Saskatchewan, and which are said to be the finest on any of the northern steamers. These and the boilers were taken overland from Edmonton to the Athabasca thence to their destination by water.

Some idea of the difficulties overcome by Captain Smith may be inferred from the fact that every board and every piece of timber used in the construction of the craft was taken out by hand, and that the only skilled labor at his command was that of one of the Hudson Bay Company's boat builders, the bulk of the work being done under the Captain's direction by Hudson Bay Company's employees and Chipewyan Indians. From the taking out of the timber in the forest to the cutting of boards for finishing the cabin, all had to be done by manual labor. It must not, however, be inferred from this that the boat is built of small stuff, or that anything of her construction has been slighted. Three-fifths of the boards used were fifty-five feet in length and of proportionate breadth, and laying the ways on which to launch her, timbers 60 feet long and a foot square were freely used. The captain took a stick 80 feet in length, and a foot square out of one tree, and could have made it one hundred and thirty feet long had he desired it. The possibilities of a country producing such timber as this are really illimitable, and to the railway first bringing it within reach of the prairie market there is assurance of an unbounded traffic.

All the lumber used was cut with a pitt-saw and the men who undertook that part of the work became so expert that the boards made by them would compare favorably with mill-cut lumber. Boards of twenty-four inches in width were cut. At the outset of the work, when Capt. Smith spoke of what was to be done, he was told it was impossible; but when they saw that he always accomplished what he undertook, they received his orders quietly, and believing that nothing was impossible with him, waited and watched to see how he would overcome the difficulties which to them appeared to be insurmountable.

But great as the difficulties were, midsummer found the boat ready to take its place on the waters that were soon to bear it to regions seldom visited by white men other than those interested in trade, or the zealous missionary whose footsteps carried the message of love to the inhabitants far ahead of the crowd of what we are pleased to call civilization, and one bright summer day it was successfully launched, amid the rejoicings of those who could understand the results sure to follow the enterprise, and the wonder of those who looked at it as something beyond their comprehension—as the work of some one more than human. As the boat gracefully glided into the water the usual ceremony of christening it was performed by Mrs. Macfarlane, wife of the Hudson Bay Company's officer in charge of that district, who named it "Grahame," in honor of the Chief Commissioner of the Hudson Bay Company. Encouraged by their success with the Grahame, the company contemplate putting a deep draft steamer on the Mackenzie River, the building of which will probably be offered to Capt. Smith. —*Globe.*

EXTENDING TIMBER GROWTH IN IRELAND.

Considering the large amount of attention periodically directed to a solution of the problem as to what shall be done to restore the condition of Ireland to the state of prosperity that existed within its confines in centuries past, and even in later times, it may fairly be matter of surprise that the pecuniary, social, and permanent advantages accruing from an extended growth of forest timber have not taken rank amongst the innumerable and varied remedies suggested. Time was when Irish timber was of such admitted excellence that it was at a premium throughout the continental and European market generally, and was much prized for the purpose of naval construction. Properly considered, the growth of timber—on the uncultivated wastes of this country—is of the highest importance. In a few years forests would furnish the material for re-housing the tenant farmers and labourers, and for the construction of all kinds of buildings required in agricultural pursuits. The fuel supply, too, would be extended, and the privations now experienced when the turf harvest is scanty be no longer possible. The improvement of soil and herbage by the fall of leaves, and the retention of fine clay now swept away, would give an abundant and rich pasturage in the vicinity of forests. Planting is essentially the poor man's question, and when the tenant farmers realize this they will recognise the utility of "planting loans" to enable them to enclose and shelter a hill slope by judiciously placed belts of trees for the protection of their stock.

Along the range of the Galtees, and amidst the wooded slopes, extensive saw-mills are in constant operation. The great feature of timber growth here lies in its commercial importance as an article of export. The principal sources of our foreign timber supply are becoming rapidly exhausted, and the time must come when the Baltic and Canadian forests will no longer be available. It is computed that at least 12,000,000 acres of forests have been consumed within ten years in the United States alone. Their 100,000 miles of railways use up forest at the rate of 5,000 miles per annum in sleepers and fuel. In the face of this, it is no matter of surprise that the Dominion should be anxious to treat with Her Majesty's Government for the importation of able-bodied Irishmen to re-afforest her wastes and mountains. But with a more genial climate, capable of producing oak, pine, and birch, that can vie, as in the past, with the best forests in Europe, there is ample work for all Irish hands at home. Mr. Howitz (the forest Conservator of Copenhagen), who made a survey of Ireland, and who is now engaged in the consideration of the problem of the control of floods by forests, observed: "We have found the key to open a paradise of wealth and prosperity for Ireland." The member for Dublin is negotiating with the Treasury to get the planting loans adjusted to the deferred nature of the problem, as a financial operation, while the security of the state for repayment in full of principal and interest is amply preserved.—*Timber Trades Journal.*

BANDS of music are forbiden to play on most of the large iron bridges of the world. This is due to the well-known phenomenon that a constant succession of sound waves, especially such as come from the playing of a good band, will excite the wire vibrations; at first, these vibrations are very slight, but they increase as the sound waves continue to come.

FOR A HARD COLD, with pain in the head, bones or through the chest, take Down's Elixir at once and in liberal doses, cover up well in bed, and your work for it, you will soon be well.

IF you are troubled with a "hacking cough," Down's Elixir will give you relief at once. Warranted as recommended, or money refunded. Price 25c, 50c, and $1.00 per bottle.

HIGHLY AGREEABLE—One very valuable feature of Dr. Low's Pleasant Worm Syrup is, that it is highly agreeable to take, and all varieties of Worms, tape worm included, can be safely expelled by it, without recourse to harsh and sickening drugs.

TRENT VALLEY NAVIGATION

The following circular as to the deputation to Ottawa, on Feb. 5th, in reference to the Trent Valley Navigation, has been sent to the various localities along the route :—

PETERBOROUGH, JAN. 10TH, 1884.

DEAR SIR,—As few, if any, of the friends and advocates of the early completion of the Trent Valley Water Route will question the propriety of as large and representative a deputation, as can conveniently be got together, visiting Ottawa for the purpose of impressing upon the Minister of Railways and Canals, and his colleagues, the desirability and importance of their obtaining from Parliament, during the session about to open, the authority necessary to enable them to place under construction during the present year another link in this most important chain of navigation; and as any attempt to consult with those whose sympathy and support entitle their views to the fullest consideration would necessitate a delay which might involve the loss of a whole season, I have, after consulting with some friends here, determined to assume the responsibility of naming Tuesday, Feb. 5th next, as a suitable time for waiting upon the Minister of Railways and Canals, and his colleagues, with reference to this matter and of inviting the Municipalities and persons interested in the early completion of this most important work to join in sending to Ottawa on that day as large and representative a deputation as possible for the purpose already stated.

I trust, in doing so, I need use no argument to impress upon all the importance of each and every one of them (*sans ceremonie*) doing his full duty in this matter at the present time. If the people along the Trent Valley route desire that their past efforts should be crowned with complete success they must keep their shoulders to the wheel—and I can conceive of no better way of doing this, in the present case, than by a repetition of the large and influential deputation to whose visit to Ottawa may be largely attributed the fact that we have now in course of construction, and in several instances well advanced towards completion, works which will add materially to the mileage already continuously navigable on this route.

I may add, that with the view of curtailing as much as possible the expenses of those going upon this deputation, I have written Mr. Arthur White, Manager of the Midland division of the Grand Trunk, asking for reduced fares for the members of the deputation over these lines, and should his response be favorable (as I have little doubt it will be) I shall make a similar application to the authorities of the C. P. R. for a similar reduction of that part of the route between Brockville and Ottawa.

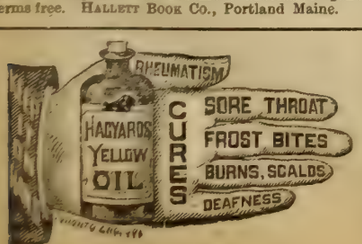
In order that I may be able to complete details as they arise, and to communicate with members of the deputation when necessary, it is desirable that I should be informed of their names and post office addresses as soon as possible.

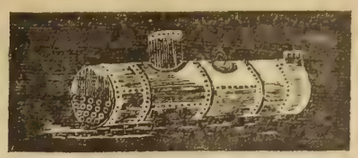
Yours Respectfully,
JOHN CARNEGIE.

P. S.—My post office address will be "Peterborough" up to the 22nd instant, after that "Legislative Assembly, Toronto."

SINGERS and public speakers are always benefitted by using Down's Elixir, as it removes the hoarseness and increases the power of the voice. Take small doses often. Price, 25c, 50c, and $1.00

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(*ESTABLISHED 1852.*)

CURRIE BOILER WORKS

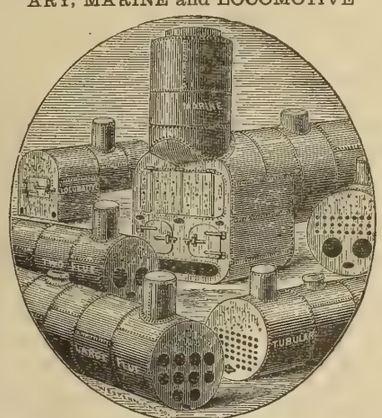
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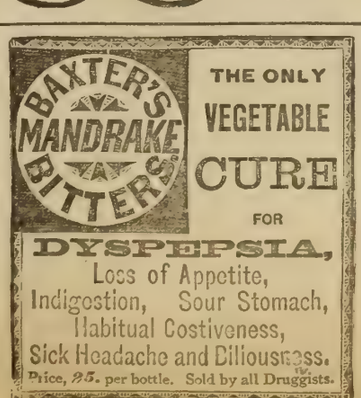
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Holds the Sash in any position so that it cannot be moved either up or down, can be put on by anyone, only requiring two screws.

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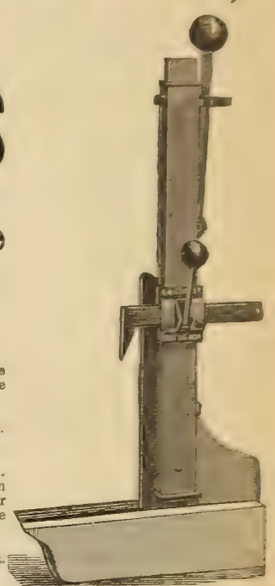
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SAW MILL DOGS



The Sawyer's Favorite

For Holding Logs upon a Saw Mill Carriage while being Sawed into Lumber.

MISSISSIPPI, June 7th, 1883.

HUGH GIBSON, ESQ.,—Your Patent Excelsior Mill Dogs give entire satisfaction, and is certainly up to your recommendation. They are the best Mill Dog in the market. I am very much pleased with them.

Yours Respectfully,
PETER McLARREN.

BERKLEY, April 20th, 1883.

HUGH GIBSON,—SIR,—The Dogs I bought of you give satisfaction. They beat any Dog that I ever saw for ripping or edging lumber on carriages. They are just the thing for scantling. I would not take $50 for them to-day and have to wait for another pair to come from you, because I believe they make two dollars a day for me.

Yours truly,
2L1y GEO. S. BROWN, JR.

Manufactured by HUGH GIBSON, CHATHAM. EXCELSIOR DOG.



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In every Size and Weight, and

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DIFFERENT KINDS OF WOOD, AND WHERE THEY GROW.

The following communication appears in the *Northwestern Lumberman* :—Perhaps a few observations on how to choose wood for the different purposes to which it is applied, and where to look for the different kinds, might be of use to some who may not have the opportunity to see for themselves. With that object in view, I propose to give a few facts as I have seen them.

To begin with, in Maine, perhaps the oldest and best lumber country east of the Rocky Mountains, and, taking everything into consideration, as good as any in the world, we find the different soils and locations producing a variety of woods, varying in quantity and quality according to the circumstances. There is probably an impression among many that the pine timber lands were occupied exclusively by the pine, but such is not the fact, except in certain locations. The immediate sea coast, and back from the sea from 10 to 20 miles is very rocky—in many places almost or quite solid rock—yet there are valleys and spaces between and among the rocks where there is good soil; also sandy places. This formation was once mostly covered with pine, with a very little hardwood mixed. Where the timber has been cut off it is inclined to grow up to the soft woods again. Occasionally the white and yellow birch take the places of the soft woods.

It is a curiosity to see how little earth or soil in the crevices of the rocks will answer to support a pine or cedar tree. It is a common thing to see trees growing on the side of almost perpendicular cliffs, where there is hardly room for the roots. These trees never grow to much size, nor are they of much value; still it shows how nature utilizes everything. As you went back into the country there was less pine and more hardwood. The pine was extra in quality and very large in the old growth; also very durable, as the old stumps testify to this day. There are old roots and remnants of stumps still in existence from which the trees were cut 60 or 80 years. The pine has no tap root, so that when the stumps become decayed enough they can be turned up and set on the roots. This fact causes the farmers to utilize them for fencing, making an impassable barrier for any animal larger than a dog. I have seen fences of that kind a hundred rods long. It was not very ornamental and an adage sprung from its looks, in common use in my boyhood, of "as homely as a stump fence."

The mixed timber was composed of pine, spruce, rock or hard maple, beech, birch, ash, hemlock, and some other kinds of not much value, with a heavy growth of brush and small trees, making it very difficult to get through the woods without cutting roads; very different from the old timber lands of the West, where a wagon can be driven in almost any direction without having to cut anything. This fact, in connection with the accumulation of dead timber and brush, which lie on the ground sometimes for years, is what makes forest fires so terribly destructive in the eastern states. Fire started in a very dry time will sweep everything before it. A forest fire of this kind burned over about 20 acres of my father's farm 60 years ago, cleaning up nearly everything. He let the land lie idle to grow up to timber again, and a thrifty young growth of hardwood came on, the largest trees 10 years ago being six or seven inches in diameter. Another fire a few miles away burned over a tract two miles square, about 40 years ago, where a good deal of cord wood and ship timber had been cut. This fire had also swept everything before it, not leaving even stumps.

The white oak growing on the rocky lands is very tough, and makes excellent timber for wagon or carriage work. The beech growing in the open land is also extra good for plane and other tool stocks, being very close-grained and hard. The fact that timber growing in the open land makes better timber where strength is required is perhaps not generally known, but such is the case. To have good timber to work easily, the closer it grows the better. The soil has a great deal to do with the growth as well as the quality. This is more marked in the west than in the eastern states. We frequently see entirely different kinds of wood divided by a small stream. This county is a very fine illustration of this fact. A creek running through it has poplar, maple, beech, walnut and the more valuable woods on one side, while on the other the oaks, black and sweet gums and the less valuable woods occupy the lands. There are large tracts of land through this region called "flat wood land," being very flat and wet. This land produces a very scrubby quality of timber, mostly black gum, black jet oak and other scrub oaks. The black gum is about as worthless a species of wood as the earth produces. The best use I have ever seen it put to is making large rollers for moving houses, as its toughness well fits it for this purpose. The texture is more like a woven fabric than like dry wood. The poplar is a high land wood and requires a dry foot. The beech, larch and maple also require dry land. The walnut will grow from the highest to the lowest land, being well adapted for planting in waste places. This fact should be taken advantage of by land owners having land not available for cultivation, such as the borders of rivers, creeks and low bottom lands. Such places planted now would, in a few years, be worth more than the best land.

To make long-bodied timber it must be planted close, as trees growing in the open land are inclined to be short in the body, with large branching limbs. The cypress and tamarac are water plants, or at least always grow in the low lands, sometimes in the water. The cottonwood and willow are also found in low, wet lands, though they grow on high ground. The tamarac is a northern swamp timber, while the cypress is a southern swamp growth. The term "swamp" in the different locations has a description peculiar to itself. A northern swamp is generally a low, springy bog or accumulation of vegetable and sedimentary matter, in many instances having a tough mass of roots, and soil unfit to trust with a heavy weight. This crust can be shaken by jumping or running across it. There are all grades of these swamps, the very wet ones producing alders, cranberry bushes, etc. As they become more firm, other aquatic woods spring up. In this kind of earth the tamarac or hackmetack delights to grow, and like its southern brother, the cypress, is inclined to have large roots, a wise provision of nature, especially for the ship-builders. The hackmetack knee is a standard article in the building of wooden ships. The "knee" is simply a very large root growing from one side of the stock of the tree, so that when hewed they can be made square, to fit the side of a beam and the ship's side, the angle being formed of straight-grained wood as it would be if bent, thus making a very strong brace. I know of no other timber that will answer the purpose, without taking very large trees. Vast quantities of hackmetack knees are taken from Nova Scotia to Maine and Massachusetts, for use in shipbuilding.

The southern swamp is pure and undefiled mud, formed as all the bottom land is by the accumulation of sediment, but by the changes in the river courses these places are not filled as other parts of the bottoms, consequently they hold water and should be called ponds, while the land is covered with timber, but when drained and cleared they are dry and solid, producing enormous crops of everything. I might qualify the word solid by saying that there is very little solid ground in the West during the wet seasons. The bottom lands dry out quicker than the uplands and can be worked much sooner and easier than high ground. The cottonwood is in its glory in this soil, taking possession of every available spot as fast as the water courses change their beds. It is a sight worth seeing to see long stretches of new formed land, sometimes miles in length, with a growth of cottonwood from a few feet to 100 feet high, the tops shaping up in an inclined plane almost as straight as a line. If the paper makers could get to this timber, or get the timber to them without too much expense, they could get an inexhaustible supply of stock.

The black locust is another valuable wood, easily raised, of very quick growth, and can be grown in waste places to good purpose, for fence posts or railroad ties, and is one of the most durable kinds of timber grown in the west. It is also valuable and much used for tree nails for fastening the planking to outside of vessels. The tree nail is a locust pin one and a quarter inches in diameter and from 16 to 24 inches long. These pins are turned in a machine made for the purpose, and are driven through the outside plank, the frame and inside plank, at distances of 18 to 24 inches apart. This constitutes an item in the building of a large ship. For fuel, locust is equal to hard maple, so that it could be profitably raised in locations that are treeless, for that purpose. Thus we see climate, soil and location govern the productions of wood, in species, qualities and quantities.

There seems to be a diversity of opinion as to the time when wood should be cut to get the best use of it. From the best data I can get my opinion is that the time when wood is at its best is when it is ripe. That point is reached in November or December. At that time the year's growth is complete. The wood takes a rest and will last better and wear better than when cut at any other time. It also has time to season before insects can bore it. The hickory, ash and oak are liable to become "powder posted" or worm eaten if cut in the early part of the season because the wood is full of sap and green. The tree cut at that time is like an animal killed in hot weather and is attacked by flies that deposit their eggs, producing the worm that eats the wood. Another reason for cutting in the fall or early winter is the fact that the tree in the early part of the season is full of sap, which ferments and commences to decay immediately. Before the wood has time to season the sour sap destroys the life of the wood. Hickory is peculiarly liable to be worm eaten, and when the worms once start to work in it they never leave it until it is all consumed, literally ground to powder.

We also observe the fact that each climate has its productions governed by certain limits. The white pine is in its glory at about the forty-fourth degree of latitude. The poplar ranges from the thirty-fifth to the fortieth. The yellow pine or the hard pine, as all the southern pine is called, seldom grows north of the thirty-fifth. There is no white pine, except on mountainous land, south of the fortieth parallel that is of any value. The vast timber forests of Ohio, Indiana, Illinois, and the most of Kentucky had not a single pine tree in the original forest as far as I know. The evergreens have been set as ornamental trees but they never thrive very long. —*B.*

Mt. Vernon, Ind.

CHICAGO PROSPECTS.

The *Northwestern Lumberman* of Dec. 29 says:—The lumber business at large is nearer to a stand-still now than it has been for three years past. No note that indicates activity comes from any quarter. It was to have been expected that December, especially during the holiday season, would be a quiet time for trade, but the extreme dullness that has characterized the present month is so much of a contrast to the briskness of November, both in receipts at the wholesale markets and distribution from the yards, that the re action is almost too much for the philosophy of lumbermen. The season's business swelled out full and large in November, but the sudden stoppage of navigation and building by cold and stormy weather chopped it square off. Lumber merchants and manufacturers are keeping their minds cheerful with the reflection that this is a dull season, and nothing but a quiet trade is to be looked for. Many of them are doing more than that; they are making themselves believe that they do not want a lively business just now. They want to rest, take account of stock and get ready for next season's tussel. They are evincing a good deal of independence. In the Northwest they are holding for firm prices, and asserting that they will not sell for less than the list figures, nor will they make a move or an offer to stimulate the demand, when such a course would tend to weaken prices. A re-action against the weakness of the past year's values seems to have set in. How long the present attitude will be maintained is a question. A fair demend after January comes in would serve to preserve the present strength. But if the existing lack of demand should be prolonged till towards spring there would be some letting go of grip-Lumbermen, like all other merchants, don't like to bottom chairs long at a time, and are apt, after waiting a while for trade, to get up and dust about for business. It is a fact that all over the country there is a surplus of coarse lumber, and it is a question if present prices could be maintained under long-continued dullness.

There is, however, no question about good common, and even cull inch lumber, in the country tributary to this market, neither about selects and uppers. Much of this stock is as good as sold now, for before spring even a dull trade would absorb all that will be decently dry. But dimension lumber is in ample supply, and if it should not move liberally before March it would likely become tired. There is an abundance of coarse stocks of all kinds at Saginaw, and plenty of coarse and a fair supply of good lumber at Albany. There is considerable lumber at Oswego, Burlington, Buffalo, Tonawanda, Cleveland, Toledo, Detroit, and other points to the eastward, but nowhere, except at Albany, is there a claim made that choice stock is in ample supply. The same is the condition on the Mississippi and in Wisconsin. Of course at the mill points aroud Lake Michigan the merchants here, and at other accessible places, have left no good stocks to amount to anything. so that what is piled at the mills is mainly common and cull lumber.

Under this general condition of things, it is likely that a continuance of a meagre demand would create uneasiness among holders, and after a while concessions would be made in order to coax trade. But the springing up of a fair inquiry in January and February would have the opposite effect.

Four Million Pails.

The pail and tub industry of Keene, N. H., consumes more timber than all others carried on in Cheshire county. There are forty pail and 30 tub lathes in operation in the county: each lathe turns out on an average 100,000 pails a year, consuming 450 cords of sapling, which gives a product of 4,000,000 pails from 18,000 cords of pine. The 20 tub and bucket lathes use a proportionately large quantity, and as great quantities of staves are sawed and sold for use outside the county, it is probable that 40,000 cords of sapling pines are cut every year. Besides much hardwood that is cut for manufacturing purposes, a vast quantity is used for fuel. Yet many competent judges think the yearly growth equals the amount cut and that there is as much growing wood and timber in the county as there was 30 years ago.—*Lumberman's Gazette.*

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain of cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup For Children Teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. I cures dysentry and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for Children Teething is pleasant to the taste, and is the prescription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., wil send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N.B.—No risk is incurred, as thirty days' trial is allowed.

How to Treat Weak Lungs--Always breathe through the nose, keeping the mouth closed as much as possible. Walk and sit erect, exercise in the open air, keep the skin scrupulously clean, and take Hagyard's Pectoral Balsam for coughs, colds, and bronchial troubles.

Be Careful What you Eat—The best medical authorities declare that worms in the human system are often induced by eating too freely of uncooked fruit and too much meat, cheese, etc. Whatever may be the cause, Freeman's Worm Powders are speedy and safe to cure; they destroy the worms, and contain their own chathartic to expel them.

A LOG SUIT.

An interesting case has just been decided in the circuit court at Muskegon, Mich. The North Muskegon Lumber Company brought suit against Roys & Co., of East Saginaw, for $30,000 damages, on account of a failure to deliver a lot of logs sold by defendants to the plaintiff in the spring of 1882. They were to be got into the river at a specified time, but the big strike rendered it impossible for the firm to fulfil their contract except in part. When the boom men struck, the mill men released the company from damage by the non-delivery of logs, and Roys & Co. set up that the North Muskegon Lumber Company was a party to that agreement. Consequently the defendants in the suit met the action for damages by asking for a judgment of $10,000 for the logs which had been delivered to the company and disposed of by it. The case occupied several days in court, and resulted in a verdict in favor of Roys & Co. for $6,192.92.

Elmwood Blocks.

Mr. Wm. White, F. S. A., in a recent letter to the *Builder*, says, in reply to an inquiry made as to the use of elm for wood-block floors, "I introduced this material in the floor of the new church at Merrifield, near Torpoint, fifteen years ago; and the blocks have lasted and worn perfectly. But they were two inches thick, and were burnettized before laying, which process does not seem to afford any certain protection from decay, though it seasons the wood by driving out the sap, and makes it less liable to the same amount of shrinkage. With elm, again, there is not the same danger of decay from a damp bed as there is with other wood. They should be laid, nevertheless, in a waterproof composition, so as not cause the wood to swell in the laying and shrink in the drying. The floor above alluded to has been kept in a fine condition by rubbing with wax and turpentine, and is quite ornamental."

The Horse in Winter.

Care should be taken that the horses are so shod that a sudden icy spell will not confine them to the stable from fear of slipping. Too many valuable horses are strained and injured by carelessness in this matter, or are kept in the stable without opportunity for healthy exercise. Remember also that they now have their winter coats of hair on, and after a smart drive the roots of the hair will be moistened with perspiration, which should be rubbed off before allowing them to stand in a cold stable, to avoid danger of sudden colds. Especial care should also be taken to clean and dry the feet and ankles, as snow, ice and frozen mud allowed to remain there over night is a severe drain upon the vitality of the animal, and a frequent cause of thrush, grease and rheumatism. Horses should never stand where a current of cold air can strike them while in the stable. Particular care in this respect is needed when they come into the stable warm after being exercised.—*American Cultivator.*

A Big Tree.

The Pembroke *Observer* says:—A big white pine tree was recently cut down and made into logs at George Car's shanty on Messrs. Bronson & Weston's limits on the Fiie du Grand. They were cut up into twelve good logs of the following measurement: 16 feet log, three of 19 inches in diameter, one of 20 inches, one 21, one 38, and one 41; 13 feet logs, one 13 inches, two 14, one 15 and one 17. These twelve logs measured made 18 standards and 75 parts. The value of the tree may be conceived when it is known that each standard is worth about a dollar and a half in Pembroke. A wood of trees of this kind would make a very valuable crop.

SNOWSHEDS are a feature of Western mountain railroads. Charles Croker, vice-president of the Central Pacific road, first suggested them. Some have steep and some flat roofs, and the cost ranges from six thousand dollars to twelve thousand dollars per mile. Snow accumulates on them in places to the depth of fifty feet. In a shed ten miles long a locomotive, with tank, etc., is kept, ready to flood any portion in which a fire may break out. Automatic electric fire alarms are provided.

The Building Boom.

In Bradstreet's list of the valuations of new buildings constructed or started so far this year are these: Chicago, $42,780,000; Cincinnati, $11,000,000; St. Paul, $9,580,000; Minneapolis, $8,310,000; Cleveland, $3,750,000; Detroit, $2,580,000; Kansas City, $2,000,000; Toledo, $1,490,000; Pittsburgh, $1,420,000; Indianapolis, $1,250,000. The estimate for Chicago is considerably less than the total last year, though by general acknowledgement the number of new structures this year is about equal to the number in 1882. This can be said, however, that a large proportion of the houses built in Chicago this year are of the small store and residence kind. The year has not closed yet, while building permits are being issued in large numbers weekly.—*Northwestern Lumberman.*

Lumbering in Arkansas.

In Arkansas the lumber industry has been developing very rapidly. In 1880 there were 319 saw mills in the state, and the number has more than quadrupled since then. The whole state is heavily wooded, the short leaved pine alone being estimated at 40,000,000,000 feet. Manufacturing is receiving considerable attention. There are now several cotton mills, while the cotton-seed mills are the most important manufactories, and produce the finest qualities of refined oil. There are also large mineral resources, as coal, iron, copper, etc. Building and real estate are making rapid progress.

The Forestry Exhibition.

Amongst the names of the members of the General Committee of the International Forestry Exhibition to be held at Edinburgh in 1884, we notice those of Sir Charles Tupper, K. C. M. G., High Commissioner for Canada, Prof. George Lawson, L.L. D., Halifax, Nova Scotia, and W. D. Dimock Esq., B. A., (late secretary, Canadian Court, London Fisheries Exhibition, London,) Ottawa.

RAILWAY ACCIDENT.—Frank Spink, Wilton Avenue, Toronto, some time ago received a bad injury by an accident on the G.T.R. The severe contusions were quickly healed by the use of Hagyard's Yellow Oil.

A PARALYTIC STROKE—W. H. Howard, of Geneva, N.Y., suffered with palsy and general debility, and spent a small fortune in advertised remedies, without avail, until he tried Burdock Blood Bitters. It purified and revitalized the blood, caused it to circulate freely, and quickly restored him to health.

THE BEST PROOF.—THE GLOBE.—"I sell more Burdock Blood Bitters than I do any other preparation in stock," says B. Jackes, druggists Toronto. If the reader will ask any druggist in the city he will get a similar answer to his query—a proof that it is the most popular medicine for the blood, liver and kidneys known.

Burdock BLOOD BITTERS

WILL CURE OR RELIEVE.

BILIOUSNESS, DIZZINESS, DYSPEPSIA, DROPSY, INDIGESTION, FLUTTERING JAUNDICE, OF THE HEART, ERYSIPELAS, ACIDITY OF SALT RHEUM, THE STOMACH, HEARTBURN, DRYNESS HEADACHE, OF THE SKIN,

And every species of diseases arising from disordered LIVER, KIDNEYS, STOMACH, BOWELS OR BLOOD.

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Manufacturers of every Description of
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WHOLESALE AND RETAIL
LUMBER MERCHANTS
And MANUFACTURERS,
☞ Dealers in WALNUT, BUTTERNUT, CHERRY, CHESTNUT, ASH, OAK, WHITEWOOD, and all kinds of Hardwood and Pine Lumber. PICTURE BACKING, HOLLY, EBONY, LIGNUM-VITÆ, RED CEDAR, &c, American and French VENEERS.
Orders for Lumber and all kinds of Factory Work promptly attended to. Lumber Kiln dried to order.
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BUCHU,
One of the Best
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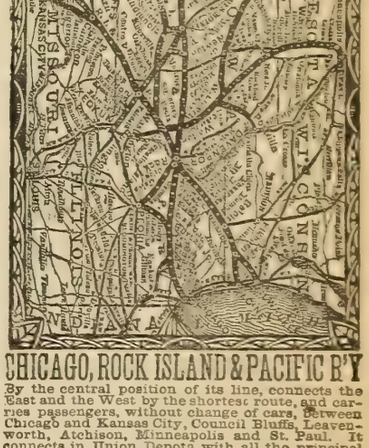
It is a specific in the cure of all diseases of the Kidneys, Bladder, Prostatic Portion of the Urinary Organs, Irritation of the Neck of the Bladder, Burning Urine, Gleet, Gonorrhea in all its stages, Mucous Discharges, Congestion of the Kidneys, Brick-dust Deposit, Diabetes, Inflammation of the Kidneys and Bladder, Dropsy of the Kidneys, Acid Urine, Bloody Urine, Pain in the Region of the Bladder, PAIN IN THE BACK, Urinary Calculus, Renal Calculus, Renal Colic, Retention of Urine, Frequent Urination, Gravel in all its forms. Inability to retain the Water, particularly in persons advanced in life. IT IS A KIDNEY INVESTIGATOR that restores the Urine to its natural color, removes the acid and burning, and the effect of the excessive use of intoxicating drink.

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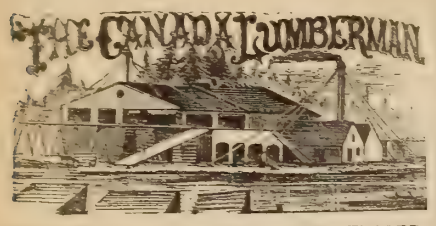
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☞ The Best in the World. ☜
GEORGE STETHEM
IMPORTER OF HARDWARE,
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WHO IS UNACQUAINTED WITH THE GEOGRAPHY OF THIS COUNTRY WILL SEE BY EXAMINING THIS MAP THAT THE



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By the central position of its line, connects the East and the West by the shortest route, and carries passengers, without change of cars, between Chicago and Kansas City, Council Bluffs, Leavenworth, Atchison, Minneapolis and St. Paul. It connects in Union Depots with all the principal lines of road between the Atlantic and the Pacific Oceans. Its equipment is unrivaled and magnificent, being composed of Most Comfortable and Beautiful Day Coaches, Magnificent Horton Reclining Chair Cars, Pullman's Prettiest Palace Sleeping Cars, and the Best Line of Dining Cars in the World. Three Trains between Chicago and Missouri River Points. Two Trains between Chicago and Minneapolis and St. Paul, via the Famous
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A New and Direct Line, via Seneca and Kankakee, has recently been opened between Richmond, Norfolk, Newport News, Chattanooga, Atlanta, Augusta, Nashville, Louisville, Lexington, Cincinnati, Indianapolis and Lafayette, and Omaha, Minneapolis and St. Paul and intermediate points.
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DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & CO., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., JAN. 15, 1884.

THE value of the lumber shipments from Ottawa to the United States during 1883 was $610,-108, against $500,281 in 1882 an increase of $109,-827.

A CURIOUS incident occurred in Dallas, Ga., recently. A bale of cotton was taken to a compress to be weighed and stored. When put on the scales it was observed that the bale was warm. The trier was inserted and the bale found to be on fire in the centre. It was taken out, and when opened burst into flames. Some considered it a case of spontaneous combustion, others that a spark might have fallen into the bale from the gin. At all events, the occurrence was uncommon.

A FOURTH in the series of lumbermen's and land lookers' excursions to Mississippi (over the Illinois Central railroad will start from this city on the evening of January 15th. It is expected that a large number will take this opportunity to visit the south. A round trip ticket to Jackson at $20 will be furnished the excursionists. For information and maps of the timber and agricultural regions to be visited, apply to M. S. Baldwin, agent for Phillips, Marshall & Co., 122 La Salle street, this city.

THE *Monetary Times* says :—The Pembroke manager of the Quebec Bank writes us on 27th December :—"Business promised well hereabouts last spring for lumbermen, but sales were few and considerable disappointment in prices was experienced ; and the outlook at present is not encouraging—the local trade fair but less than previous year ; payments met easily ; wages high with outlook for next summer fair." Writing from St. Ann de Bellevue, Quebec, on the subject of the timber trade, Messrs. J. & B. Grier tell us "that our dimension timber business has been very satisfactory, demand being good and prices about the same as last year's. The Lachine timber market has been very active, prices all around equal to last year's. Our Upper Ottawa timber arrived in Quebec somewhat late, and we concluded that it would be better to hold till next season than to sell at prices offered last fall."

THE importance of the Glasgow shipping trade may be gathered from the printed list of shipowners entitled to vote for the election of the Clyde Trustees. Five hundred and seventeen shipowners are voters. Several own fleets of steamships worth millions sterling, while no voter owns less than 100 tons. The estimated value of vessels owned on the Clyde is £26,000,-000 sterling, or, in round numbers, $130,000,-000.

WE learn that French ingenuity has hit upon a plan to substitute other woods for mahogany, by the following process, and which might be practised on birch, ash, lime, and &c., with every prospect of success. The first operation is to plane the surface of any species of close-grained wood until it is perfectly smooth, and than rub it with diluted nitrous acid, to prepare it for the materials to be subsequently applied. These consist ofone and a half ounces of dragon's blood, dissolved in a pint of spirits of wine, and one-third of that quantity of carbonate of soda, mixed together and filtered ; the liquid in this state is then laid upon the wood with a soft brush, and when dry the application is repeated, with very little alteration, till the wood possesses all the appearance of mahogany.

The Ottawa *Citizen* says :— That the condition of the square timber trade at the close of 1883 was unsatisfactory, not only to producers but as well to the merchants of Quebec, is no news to any person in the trade. This unfortunate state of one of our most important industries is, however, not consequent upon anything that could be remedied in this country excepting, perhaps, by a reduction in the quantity produced. In the early part of the season the prospects of a fair season's business were, by the more sanguine, considered very promising, but these anticipations were unfortunately not realized. Doubtless some lots of Ottawa timber were sold at good prices, which amply repaid the producer the high prices of production of last winter, and gave a good profit on the year's business, nevertheless a very large quantity of our timber remains in first hands at Quebec.

FORESTRY.

THE letter by R. W. Phipps, which we publish in another column, deserves thoughtful consideration by those who wish to see our forests less wastefully ravaged, and even a reproduction of woodland, where the denuding process has been carried too far. Mr. Phipps suggests one means by which this desired end can be attained.

HOW TO LOG.

There are two methods of logging. One is to cull the best timber, and the other is to cut it clean, Each way has its advocate. When the first named way is pursued the operator has choice stock to offer for sale, and such stock is always wanted. But some day there is sure to come deterioration. At the end the grades cut from the leavings must necessarily be poor. The lumber on dock in the Saginaw valley is an illustration of this. When pine was everywhere plentiful the operators picked out the best. The lumber manufactured was good, and, as a rule, found ready sale, To-day the docks are piled with coarse lumber which is a drug. This lumber was sawed largely from timber which had been left. The operators who cut their timber clean as they go may not at any time have as much first class stock on hand as they may desire, but their grades are even year after year. The dealers who buy of them know what to expect. When such operators are about to clear up their lands there is no tail end to the business that will be unprofitable, We believe that more operators understand this than there did a few years ago. A steady business is now what is desired, and such a business is dependent on grades that can be easily marketed.

THE PROSPECT.

The *Monetary Times* of Jan. 4th, says :—The state of the timber trade, one of Canada's chief industries, is not encouraging. In J. Bell Forsyth & Co.'s latest circular, we read :—

"The spring business opened with a feeble demand as the shipping houses were holding over stocks from 1882 ample for their requirements, so that a very few sales were then effected and at prices slightly under the closing figures of the previous year. During the summer months the market remained in a drooping state, only an occasional raft being disposed of with difficulty, while early in the autumn several sales were effected at fair rates ; since that period everything has been stagnant, even the local market is exceedingly dull, and at present we can discern no signs of recovery from this unfortunate state of things."

The following prices for the last two months are based on actual sales at Quebec, except in some cases where no sales have taken place :

White pine in raft, for inferior and ordinary, according to average, quality, &c., measured off	$0 18	$0 20
For fair average quality, according to average, quality, &c., measured off	0 20	0 23
For good and good fair average, according to average, quality, &c., measured off	0 23	0 26
For superior, according to avearge quality, &c., measured off	0 27	0 36
In shipping order, according to average, quality, &c	0 20	0 38
Waney board 18 to 19 inch, according to average, quality, &c	0 31	0 34
Waney board 19 to 21 inch, according to average, quality, &c	0 34	0 36
Red pine, in the raft, measured off, according to average and quality	0 12	0 18
In shipping order, 35 to 45 feet, according to average and quality	0 16	0 22
Oak, Canada, by the dram, according to average and quality	0 40	0 43
Oak, Michigan and Ohio, by the dram, according to average and quality	0 47	0 49
Elm, by the dram, according to average and quality, 45 to 50 feet	0 34	0 85
Elm, by the dram, according to average and quality, 30 to 35 feet. No sales	0 00	0 00
Ash, 14 inches and up, according to average and quality	0 32	0 35
Birch, 16 inch average, according to average and quality	0 23	0 26
Tamarac, square, according to size and quality	0 12	0 13
Flatted, according to size and quality	0 10	0 12
Staves, merchantable pipe, according to quality and specification	$350	$360
Staves, W. O. Puncheon, merchantable, according to quality and specification	$80	$85

Deals, bright, according to mill specification, $108 to $110 for 1st. $68 to $70 for 2nd, and $32 to $34 for 3rd quality.

Deals, bright, Michigan, according to mill specification, $125 to $127 for 1st, and $86 to $88 for 2nd quality.

Deals, dry floated, according to mill specification, $104 to $106 for 1st, $66 to $88 for 2nd, and $32 to $34 for 3rd quality.

Deals, bright spruce, according to mill, specification, $36 to $38 for 1st, $22 to $24 for 2nd, and $10 to $21 for 3rd quality.

The timber trade is subject to periodical inflations and depressions ; and periodically, production is greatly in excess of demand. When heavy stocks have to be carried over a year or two, the interest of the weakest holders is apt to drop out, and the banks become the parties chiefly interested. This experience is not lost on the banks. At present they are drawing the reins tight on lumberers ; and productions will consequently be greatly decreased this winter. Still Messrs. J. Bell Forsyth & Co. express the opinion that the supply, greatly restricted as it will be, will exceed "the present very limited requirements." Of course, it is not exactly the present, but the near future requirements that will control prices ; and the important question is what next year's demand is likely to be ? A question more easily asked than answered.

Low prices and a feeble demand in England will affect production on the Baltic, as well as in Canada. The *Timber Trades Journal* prints a letter from Riga, in which it is stated that shipments to England have only been made to clear off large stocks before next spring. Only small quantities are expected to come on the market next spring. Exporters are unwilling to enter into contracts at present prices. The cut will consequently be restricted there as well as here. These facts lead the Riga correspondent to express the opinion that higher prices may prevail next spring.

We learn from the same journal, of the 22nd December, that the London dock deliveries for the previous week had been unusually heavy. But in dock stocks the difference is not great ; and the small difference between present stocks and those of past years is attributed to cheap freight. So much stress is laid on this fact that the opinion is expressed that "with the normal rate of freight ruling for the fall, probably the difference between the 1883 and 1882 stocks in the docks here would have been several million pieces in favor of the latter on deals alone, while the augmentation to the flooring stocks, which has turned the scale against those of 1882, is also due to cheap rate of tonnage." From this, the conclusion would seem to be fair, that any sudden impulse given to the demand might, next spring, send up prices. But that impulse may be found to be wanting.

Returning to the Forsyth circular, we find the export of the year from Quebec of the following woods exceeded that of 1882.

WHITE PINE.

		Supply.	*Export.*
1883	Square	7,412,034	10,427,000
	Waney	3,786,523	
1882	Square	8,053,086	7,912,160
	Waney	3,127,129	

Stock.

1883	7,780,620	Square.
	2,758,840	Waney.
1882	6,532,152	Square.
	3,354,943	Waney.

Of red pine the quantities that now come forward are very small compared with what they were formerly—about one tenth. The Irish market that takes much of this timber cannot now be depended on :—

	Supply.	*Export.*	*Stock.*
1883	498,111	1,048,960	1,510,925
1882	1,474,881	1,024,680	2,362,624

The sources of supply of oak for the Quebec market seem to be approaching exhaustion ; the quantity found there has greatly decreased in the last decade. And the quantity wintering at Garden Island is less than usual :

	Supply.	*Export.*	*Stock.*
1883	1,916,322	2,132,880	1,203,347
1882	1,316,719	1,957,320	1,362,153

There is encouragement to cut more elm, since the demand for it last season seems to have fully equalled the supply. And in Great Britan the stock is exceedingly small. The stock at Quebec is unprecedentedly light :

	Supply.	*Export.*	*Stock.*
1883	309,531	739,920	87,424
1882	714.549	778,360	590,611

Ash, too, has been in good demand ; and the stock on hand is light :

	Supply.	*Export.*	*Stock.*
1883	263,448	346,320	135,228
1882	310,769	297,040	212,422

For birch there is a good demand, with a light supply ; and manufacturers will of course take these facts into account :

	Supply.	*Export.*	*Stock.*
1883	132,624	233,040	6,629
1882	251,920	213,680	78,413

American competition has of late interfered with the trade in staves at Quebec ; exports thence having greatly fallen off :

1883	Pipe	680	549	470
	Puncheon	663	933	805
1882	Pipe	565	450	293
	Puncheon	1,430	850	1,007

The Quebec trade in deals is increasing :

	Supply.	*Export.*	*Stock.*
1883	3,228,622	3,993,072	1,543,359
1882	4,611,875	3,148,688	2,507,704

The quantity of deals wintering at Ottawa is about the same as last season. In spruce deals the Quebec market is represented by these figures :

	Stock.	*Export.*	*Stock.*
1883	3,569,440	2,729,685	1,752,725
1882	3,239,960	2,787,309	1,012,920

This kind of wood, largely obtained in New Brunswick, is greatly over-produced ; and it is believed this winter's cut will be, as it ought to be, small.

It may be fairly concluded, from these facts, that over-production will not be pushed dangerously far this winter. The future prospect of the timber trade is gloomy, but not hopeless. A brisk demand falling upon a moderate supply would cause a much desired revival ; and even with a moderate demand, it ought not to be difficult to carry the stocks that will be marketed next spring.

SUBSCRIBE for THE CANADA LUMBERMAN.

THE SAW MILL IN EARLY DAYS.

Lumber, wood, or timber, in its various forms enters largely into the industry of this country, and its rapid and economical conversion from forest to factory, and then into articles of good utility is of paramount importance. The conversion of wood into articles of use by machinery, has, during the last quarter of a century, made great strides, but there still remains an unlimited field for further progress. The great cost, and in many cases the inferior quality of work turned out by hand, have rendered the increasing introduction of labor-saving machinery absolutely necessary, to keep pace with the general progress of the times, and it has been found that in doing this the wages of skilled artizans have been increased; as cheaper production creates greater demand. The value of the yearly products of the forests is larger than the iron production, gold and silver mines, and the grain crops combined, and enters every path and channel in domestic and commercial economy. This interest so intrinsically important, necessarily extended, and susceptible of influences favorable or adverse from the chief centres of financial activtiy, so sensitive to climate changes, tempests, floods, and droughts, but still more affected by the sayings, and doings, and purposes of the great motive combinations which insure it a market, has developed from small and crude beginning, and encountered, in its early days, violent opposition from the ignorant.

Wherever the axe is heard it is the great precurser of civilization. It has cleared our forests, and made what was before a barren waste, smile as a garden, with flowers and plenty. After the axe comes the saw mill, another great civilizer. The saw has ever played a conspicuous part in the economy of manufactures, and its importance will readily be admitted when we consider how essential a bearing it has upon everyday life, and how conducive it is to the development of those useful arts upon which, to a great extent the very existence of civilized humanity depends. Its extended and universal employment in the higher class of industrial art, has, in a great measure, contributed to the advancement of civilization, and prosperity, by administering to the production, not only of those things which are necessary to our being, but of those who tend to cultivate the taste, and refine the mind. The invention of the plumb-line and the saw are ascribed to Dædalus and Talus, the latter having found the jaw bone of a snake, cut a piece of wood in two with the teeth, and from this originated the saw, so we are told, and it is much easier believed than to go seek the truth, as it matters little to us at the present time, It is recorded that the discovery cost the young man Talus his life.

The modern saw mill is said to be a German invention, away back in the early centuries. In 1824 the city of Breslau had a saw mill. In 1490, the magistrates of Erfurt purchased a forest and built a saw mill. In Norway, a country covered with wood there was built in 1530. This mode of treating wood was called the new art, and because the exportation of deals was by that means increased, a royal impost was introduced by Christian III, in 1545, called the deal lithe. Soon after Henry Rauzan caused the first mill to be erected at Holstein. In the year 1555, the Bishop of Ely, being Ambassador from Princess Mary, of England, to the Court of Rome, observed a saw mill in the neighborhood of Lyons. He describes it as being driven by an upright wheel, "and the water that makes it go is gathered whole in a narrow trough, which delivereth the same water to the wheel. This wheel hath a piece of timber put to the axle tree end like the handle of a brooch and fastened to the end of the saw which turned with the force of water, hoisteth up and down the saw, that it continually eateth in and the handle of the same is kept in a rigall of wood from swerving. Also the timber lieth as if it were upon a ladder, which is brought by little and little to the saw with another device." Such is the description given of a saw mill at this early date. In the sixteenth century there was a grand improvement made on this machine by which timber could be cut in several planks or boards of any thickness. There was one of these at Ratisbon on the Danube in 1785. Saw mills were received in England with as little encouragement as printing was in Turkey, and from the same motive when the attempt was made to introduce them, it was said that the sawyers would be deprived of bread, and for this reason says a writer in the *Mechanics Magazine*, it was found necessary to abandon a saw mill, erected by a Hollander near London in 1663.

"However in the year 1700, a gentleman named Houghton laid before the nation the great advantages to be derived from them, but he expressed his apprehension that it might cause a commotion among the people, and what he feared actually came to pass, for on the erecting of one by a wealthy timber merchant, by the desire of the society for the promotion of arts in 1767, to be propelled by the wind, under the direction of James Stanfield, who had learned the method of constructing them in Holland and Norway, a mob assembled and pulled it to pieces. What great strides have been made, both in the arts and education of the people, since that time, may be attributed to the civilizing influence of popular governments.

HOW TO ADVERTISE A TOWN.

A correspondent of the Chattanooga *Trademan*, writing from Handsboro, Miss., says: "I hereby make a brief statement of some of the wants of this vicinity—this place in particular. Hansboro, Harrison county, Mississippi, is a small manufacturing town, of about six hundred inhabitants, one mile back from Mississippi City, a station on the Louisville & Nasville Railroad, and midway between the cities of New Orleans and Mobile, seventy miles either way. Here we have direct rail, water, mail and telegraphic connection to any or all points. We have a favorable locality—said to be the healthiest of the country; a congenial climate. Labor is cheap, and fuel cheap and abundant, also crude material for manufacturing is abundant and cheap.

A furniture factory to make *cheap* furniture of the native woods, as bay, magnolia, black jack (gum) and pine.

A furniture factory to make *fine* furniture, as fine woods can be brought here cheaper than to any part of the country. We ship large quantities of our yellow pine to Mexico and Central America; the native would be glad to give fine woods in payment and the vessels eager for return cargoes.

We have a fine harbor at our doors at Ship Island. One or more canning factories to put up fish, shrimp, oysters, vegetables and fruits.

A factory to make packing boxes and broom-handles.

The products of these are all such as this section of the country depends for altogether on the West and North. We will gladly welcome any one coming in our midst, whether in pursuit of business, health or pleasure.

Spindle Making.

"On a recent visit to Taunton, we were permitted to inspect the spindle making machinery in the Mason Machine Works. To one who is old enough to look back on bygone ways and methods, and especially on the honored "hand made" article of our grandfathers and fathers, this machinery is a wonder indeed; especially to see a boy put his rods in the fire, and when the proper heat is attained put one of the rods into a guage trip hammer, striking nearly a thousand blows per minute, and from one space to another, so that without apparent effort, a perfect spindle is formed in less than one minute of time, and so perfect that all are just alike, and so near perfect that grinding is now a thing of the past, and only a surface polish is necessary. By this method the hardened shell is not removed by grinding, and an absolutely perfect spindle is the result. But the steel is made so dense, and the process of hardening is such that if dropped on a hard surface they are liable to break like a pipe stem. The object of all this is to get a spindle that will bear the immense strain of speed brought to bear on it without detecting the slightest vibration. The ordinary observer would say that it is "only a spindle," which is very true, and yet that little spindle made Great Britain the richest nation on earth, and if wise councils prevail in our legislative assemblies, and the little spindle is properly cared for, America will become richer and stronger than all the nations of the earth combined."—So says the *Cotton, Wool and Iron*.

Another Timber Preserving Method.

A new way of treating timber is thus stated: One of the most encouraging among the various methods which have been brought forward for the preservation of bridge timber and railroad ties would seem to be that which, in the first place, subjects the finished timber to an adequate dry heat, and then immerses it in a hot bath composed of certain proportions of asphalt and carbolic acid. The effect of this treatmeht is, that on cooling, the solvent of the asphalt evaporates, leaving a skin of coating of asphalt on the surface of the wood, which resists water and keeps the antiseptic material fixed securely within the pores of the wood. The exterior of the wood, on the completion of this process, presents a smooth and dark surface requifing no paint.

Birch in Wisconsin.

An item in a Door County, Wis., paper states that a man from this city had been in the neighborhood of Jacksonport purchasing all the birch logs that could be had in that section, $6 a thousand feet, delivered at the mill, being paid. Recently a lumberman of this city, who had been along the Milwaukee, West Shore and Western railroad, discovered that there was a large amount of Black birch in the new sections traversed by that road, in Marathon and Lincoln counties. As yet this birch is not valued as highly as the merit of the wood demands, as the owners of it up there have not taken adequate measures to secure a market for it. It is possible that a birch buyer might find it to his advantage to investigate the quality of this timber in that part of Wisconsin.

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COSTLY WOODS.

The finest and most costly of veneer woods is French walnut—a wood that does not come from France, but from Persia and Asia Minor. The tree is crooked and dwarfed, and is solely valuable for the burls that can be obtained from it. In these the grain is twisted into the most singular and complicated figures. The intricacy of these figures, combined with their symmetry, is one of the elements that determine the value of the burl. Color and soundness are other elements of value, which varies very widely. Burls worth from $500 to $1,000 each are not rare, and at the Paris Exposition for 1878, one one burl weighing 2,200 pounds was sold for $5,000, or upwards of two dollars a pound.

In buying burls much care is necessary to guard against fraud. Often decay or malformation results in leaving hollows in the very centre, which, of course, greatly lessens the value. These hollow places are sometimes filled by fraudulent dealers with substances resembling the wood, and the whole is sold at a very much higher price than it is worth. Compressed manure is one of the materials used for this purpose. An even worse fraud than this is that of placing stones in the hollows to increase the weight and thereby enhance the value of the burl. This not only cheats the buyer, but is liable to ruin the valuable knives used in cutting the veneers. There are rosewood and mahogany burls, but, unlike those of the French walnut, they are but of little or no value. In those woods it is the trunk of the tree that is prized; the knots are discarded.

Next to French walnut, ebony is probably the most valuable of the cabinet woods. Occasionally a fine piece is found that brings even a better price than the French walnut. For a particulary large piece, even $5 a pound might be paid. In ebony the main thing is size. It is difficult to get large pieces that can be used without cutting. Rosewood and mahogany are always in demand. The best mahogany is that of San Domingo. Next comes the mahoganies of Cuba, Honduras, Mexico and Africa. There is much less difference in value between different mahoganies and rosewoods than between different specimens of ebony and French walnut. Fair rosewood will sell in the log for 5½ and 7 cents per pond.—*Lumber World.*

REDUCED SUPPLIES.

The *Timber Trades Journal* of Dec. 15, says: Writing from Riga our correspondent says:—The hopes of an improvement in the timber trade which were raised by the unfavorable weather during the spring and summer have unfortunately not been realized. Although the shipments of boards have been large they have not been very remunerative, owing to the low prices ruling on the Continent and England, and they have for the greater part only been made to clear the large stocks before the coming spring. The extraordinary state of the weather this autumn, which has hitherto prevented nearly all forest work, and when now at last the winter really commences there can be no doubt that owners will cut less wood than usual, particularly with reduced prices before them. Several of the smaller saw-mills have been stopped for want of raw material, and the larger mills have greatly reduced their production. The fact that only comparatively small quantities will come on the market next spring seems to justify the expectation of higher prices. There are here large stocks of sleepers of all dimensions, but they are held in strong hands. The unwillingness of exporters to enter into any large contracts during the present slackness of the trade will no doubt also cause owners to cut less liberally, and this is another reason why we may look forward to considerably smaller supplies next spring compared with what they were this year.

COULDN'T BELIEVE IT.

During a recent conversation with Mr. Dwight Cutler, president of the well-known Cutler & Javidge Lumber company, of Grand Haven, upon the subject of improvements in saw mill construction and operation, that gentleman told a newspaper reporter of a visit he paid, some few years ago, to what was then considered a model and modern saw mill somewhere down in New England. Mr. Cutler was at that time visiting the neighborhood of his old home, and, being a lumberman, was invited to look over what was considered a crack saw mill, located upon a rapid stream of water which furnished the power to operate it. He found a single circular saw attached directly to the water wheel and making, of course, the same number of revolutions. He was introduced to proprietor as a lumberman from Michigan. The proprietor was operator of the mill himself, and would saw off a board, walk around to the end of the carriage, pick it up and carry it out to the end of the mill, when he would return and saw off another. After operating a while in this manner he accosted Mr. Cutler with "what do you think of that? Got anything out west that will beat that?"

"How much can you saw in a day?" asked Mr. Cutler.

"Twenty-five hundred feet," promptly and triumphantly answered the satisfied sawyer-proprietor.

"Well," said Mr. Cutler, with the deliberate utterance characteristic of the man, "just before I left home some St. Louis men came up to see how a circular mill invented by one of my townsmen would work. It was started up and operated for one hour and cut a trifle over 5,360 feet."

"That's a d——d lie. It can't be done?" said the New England saw miller with energy and decision. Mr. Cutler tells this story with an evident relish of the recollections it evokes.—*Lumberman's Gazette.*

HOW TO RECOGNIZE GOOD WOOD.

Rankine says that there are certain appearances characteristic of good wood, to what class soever it belongs. In the same species of wood that specimen will in general be the strongest and most durable which has grown the slowest, as shown by the narrowness of annular rings. The cellular tissue, as seen in the medullary rays (when visible) should be hard and compact. The vascular or fibrous tissue should adhere firmly together, and should show no woolliness at a freshly cut surface; nor should it clog the teeth of the saw with loose fibres. If the wood is colored, darkness of color is in general a sign of strength and durability. The freshly cut surface of the wood should be firm and shining, and should have somewhat of a translucent appearance. In wood of a given species the heavy specimens are in general the strongest and most lasting. Among the resinous woods, those having the least resin in their pores, and among the non-resinous woods those which have the least sap or gum in them, are in general the strongest and most lasting. Timber should be free from such blemishes as "clefts," or cracks radiating from the centre; "cup shakes," or cracks which partially seperate one layer from another; "upsets," where the fibres have been crippled by compression; "wind galls," or wounds in a layer of wood, which have been covered and concealed by the growth of subsequent layers over them; and hollow or spongy places in the centre or elsewhere, indicating the commencement of decay.

DESTRUCTIVE GALE IN MAINE.

The recent gale in Maine was of a widespread and destructive character. It continued for 24 hours, doing damage in almost every part of the state from Piscataquis to the St. Croix, and from Aroostook to the sea. The forests were injured in Oxford, Franklyn, Somerset, Piscataquis and Penobscot counties, the damage being especially great in the two latter counties. The hardwood growth generally withstood the fury of the gale, but the softwoods, particularly of a small growth, readily succumbed; spruce, pine, hemlock and poplar were felled with almost a clean sweep where the gale was raging most severely. The birch was too firmly rooted to be brushed away so readily, and little of it was blown down. In places where timber was left standing it was so matted with blown down trees and underbrush as to almost ruin it. Nothing could be done toward bringing partial order out of chaos in the woods till the arrival of snow, and then the down timber will be so buried that little can be done. In the spring the fallen timber will be the prey of worms and borers. Consequently the timber that is blown down is regarded almost a total loss, to say nothing about an existing danger of a culmination of disaster by the breaking out of fires during the summer months. It is not known how great the general loss has been, but the timber on thousands of acres of land has been ruined. In Long A township the timber on 22,000 acres, mainly owned by C. G. Sterns, of Bangor, was destroyed. Before being damaged the tract was valued at $60,000, and operations to the amount of about $10,000 had been planned for this winter. Much damage was done to logging camps, and operations were generally obstructed, roads being blockaded, and outfits destroyed. No loss of life had been reported up to a late date.—*Northwestern Lumberman.*

Development of Forest Trees.

There exists a great diversity among trees in their periods of development, some have a brief rotation. The coppice growths in European forestry are often utilized in periods of ten or fifteen years; in our own country, too, we have many trees of short rotation, and some of the most useful and profitable trees are of this character. Dr. Warder, of Ohio, in a paper on "Forestry," says:

The black locust may be harvested after it has grown from twenty to thirty years.

The catalpa speciosa in the same period will make good cross-ties and fence posts.

The ailanthus very soon attains a useful size, and for certain purposes has been highly commended, both in this country and in Europe. Professor C. S. Sargent is advising its extensive planting, and some years ago it was spoken of as the most promising tree for the arid plains of the Southwest.

The forests of Scotch pine in Germany are allowed sixty years to reach their useful size for fuel and for timber.

The birch there reaches its maturity in about half a century.

The willow used for charcoal needed in the manufacture of gunpowder may be cut after growing twenty years or even less.

Chestnut, in its second growth, is most profitably cut every twenty or twenty-five years.

The beautiful wood of the wild cherry soon reaches a profitable size for many purposes, though for saw logs and lumber the tree should be larger.—*Southern Lumberman.*

The Eucalyptus.

Where there is surplus moisture to dispose of as for example, a cesspool to keep dry, a large eucalyptus, states the Pacific *Rural Press*, will dispose of a vast amount of house sewerage. But if you have water which you do not wish to exhaust, as in a good well, it would be wise to put the eucalyptus very far away. Daniel Sweet, of Bay Island Farm, Alameda County, recently found a curious root formation of the eucalyptus in the bottom of his well, about sixteen feet below the surface. The trees to which the roots belonged stand fifty feet from the well. Two shoots pierced through the brick wall of the well, and sending of millions of fibers, formed a dense mat that completely covered the bottom of the well. Most of these fibres are no larger than threads, and are so woven and intertwisted as to form a mat as impenetrable and strong as though regularly woven in a loom. The mat when first taken out of the well was water soaked and covered with mud, and nearly all a man could lift, but when dry it was nearly as soft to touch as wool, and weighed only a few ounces. This is a good illustration of how the eucalyptus absorbs moisture, its roots going so far to find water, pushing themselves through a thick wall, and then developing enormously after the water is reached, Mr. Sweet thinks one of the causes of the drying up of wells is the insatiable thirst of these vegetable monsters. —*Scientific American.*

Petitioning for Forest Preservation.

NEW YORK, Dec. 29.—The canal boat owners and Commercial Association, comprising 600 members, considered the subject of the destruction of the Adirondack forest and its effect on the canals last evening. The secretary said that canal men had long observed that the cutting of timber in the Adirondack woods had a tendency to lessen the supply of water in the canal. A member said if the ravaging of the forest were not checked the State would be put to the expense of millions in building reservoirs to supply the canal with water. It was resolved to memoralize the legislature to put a stop to the destruction of the forests.

BOARD OF TRADE RETURNS.

The following are the returns issued by the Board of Trade, for the month of Nov., and for the first eleven months of the year:—

MONTH ENDED 30TH NOV., 1883.

Timber (Hewn).	*Quantity. Loads.*	*Value. £.*
Russia	18,065	34,412
Sweden and Norway	55,261	85,029
Germany	35,396	92,939
United States	5,825	28,364
British India	706	8,488
British North America	49,942	232,798
Other Countries	26,249	32,022
Total	191,444	514,052
Timber (Sawn or Split, Planed or Dressed).		
Russia	83,385	192,110
Sweden and Norway	151,658	327,300
British North America	152,073	386,523
Other Countries	20,690	61,407
Total	407,806	967,340
Staves, (all sizes)	13,623	65,109
Mahogany (tons)	7,130	66,986
Total of Hewn and Sawn	599,250	1,481,392

ELEVEN MONTHS ENDED 30TH NOV., 1883.

Timber (Hewn).		
Russia	269,427	533,427
Sweden and Norway	590,598	933,801
Germany	327,394	843,236
United States	104,881	403,613
British India	40,300	568,150
British North America	312,128	1,488,243
Other Countries	351,894	472,117
Total	1,996,622	5,242,587
Timber (Sawn or Split, Planed or Dressed).		
Russia	1,028927	2,360,309
Sweden and Norway	1,642,893	3,670,439
British North America	1,119,298	2,851,160
Other Countries	324,145	1,034,292
Total	4,115,263	9,916,200
Staves (all sizes)	132,369	572,657
Mahogany (tons)	47,766	472,812
Total of Hewn and Sawn	6,111,885	15,158,787

Not too Cheap.

Further difficulties in the lumber trade give emphasis to the view recently advanced in these columns, that the present ought to be a good winter for curtailing production. It would really be a good thing for the trade should the weather prophets prove right, and the winter's fall of snow be so light as to discourage heavy slashing in the woods. It is the merest folly for Canada to waste her timber, cutting more than people abroad will buy, and so pulling down the price. It used to be said of the American cotton crop that a light crop brought as much money into the country as a heavy one, for the simple reason that the price rose with the former and fell with the latter. For instance, four million bales exported at $50 per bale came to just the same money as five millions at $40 per bale. Something to the same effect may be said of Canada's annual timber crop. The world outside does not thank us for making our greatest export too cheap.—*Canadian Manufacturer,*

Average Weight of Lumber.

An Indiana hard wood lumber manufacturer gives the average weight of lumber per foot as follows:—Green walnut, 4½ pounds; dry, 3½; green poplar, 3¼; dry, 2¼: green oak, 5; dry 4¼; green ash, 4½; dry, 3½; the weight of cherry is the same as walnut, and hickory the same as oak.

GERMAN technical journals recommend the following method for the preservation of wood: The boards are put into a large receptacle and are covered with quick-lime, which is then gradually slaked by a slow addition of water. Wood to be used for mining purposes is kept in the receptacle for about a week until thoroughly saturated, other woods need less time. The wood obtains by this treatment a remarkable solidity without losing anything of its elasticity.

Chips.

It is estimated that 1,000,000 feet of logs, mostly belonging to Snoqualmie loggers, went out to sea in a late freshet. The loss amounted to about $6,500.

The Chicago, Milwaukee & St. Paul railroad has used 5,000,000 feet of lumber this season in building snow fences to the extent of 15 miles on its northwestern lines.

The Winnipeg *Times* says:—The St. Albert Mission authorities will get out 1,000 logs, about 100,000 feet of lumber, from their limit at Egg Lake this winter to be worked up in the Sturgeon mill next summer. Mr. Mijeau, of St. Albert, is the contractor.

A large belt was made in Lowell, Mass., this winter. It was of leather, 160 feet in length, 54 inches wide, three ply. It took the backs of 200 hides to make this belt, its weight is over a ton, and the cost over two thousand dollars. The belt was for Pillsbury, of Minneapolis,

The total packing of salmon on all the rivers on the northwest coast of America in 1882, amounted to 941,187 cases, each of which contained the equivalent of 48 pounds of canned fish, or at least double that amount of flesh fish, equal to about five million individual salmon of ten pounds each.

The ship Portland, from Quebec to Greenock, laden with lumber, was abandoned by the crew November 16, and became a total wreck. The last seen of the crew was in a boat struggling against a wave toward a point where it seemed impossible to land. No tidings from them had been received up to a late date.

Parties at Caribou, Maine, are gathering the cedar bark about the shingle mills and other places and ship it to Massachusetts, where it is manufactured into a coarse paper to be used under carpets to keep away moths and other insects. Here is an idea that may be valuable to owners of cedar in this vicinity.

A large pile of lumber fell in D. J. Carroll's yard, New York city, November 24. One man, Martin Cunningham, was crushed to death instantly, and several injured. Three were taken to the hospital, and may not recover. The pile of lumber was 16 feet square, and the men were running it up 30 feet high.

A pine tree lately cut for Cade & Elya Brothers, near Frederickville, Mich., which was nearly six feet in diameter at the stump. It was cut into five logs, three 12 feet and two 16 feet long, and contained 8,216 feet of stuff, so good that it was estimated to be worth $30 a thousand. The total value of the tree, at this rate, was $246.48.

New buildings have recently been erected in Tokenhouse Yard, London, for Messrs. Spiers & Pond as a restaurant, covering altogether an area of 11,800 square feet; all the ornamental woodwork is of American walnut. It is worth recording that Tokenhouse Buildings, which have been erected at a cost of about £80,000, stand on ground left in trust to the Mercers' Company by Lord Mayor Whittington.

The uses to which paper may be put at some future day cannot be told at present. From the simple writing and printing paper we have slowly ascended to artificial parchment, water pails, bath tubs, boxes, houses, chimneys; and the latest use of paper has been made in St. Petersburg, Russia, in the construction of a paper vessel, 25 feet long and five feet wide. She is driven by steam and the trial trips have proved quite successful. The recent trials made for the purpose of using paper for railroad purposes has led to this experiment.

A specimen of extra quick work in the line of bridge construction was mentioned at a recent meeting of the Engineers' Club of Philadelphia. The following notice was read from the *Mexican National* of Laredo, Tex.: "On the sixth day of September, the anniversary of the loss of the bridge last year, the Mexican national railroad bridge was carried away by high water. On the 16th of September the first pile was driven for the new structure, which was completed on the 23rd, and trains were running regularly after that date." This is pretty quick work, the erection of a bridge six hundred feet long in seven days.

A manufacturer of logging sleighs and wheels at Grand Rapids, Mich., is of the opinion that large wheels will supercede sleighs for logging purposes. In his business of supplying the means for hauling logs he finds that the demand for sleighs is diminishing as compared with the requirements for wheels. Snow is becoming a precarious surface for locomotion, and summer logging is becoming more in vogue each year.

Mr. E. Jack of Fredericton, N. B., leaves for Edinburgh, Scotland, in April to attend the Forestry Exhibition. He goes at the instance of the New Brunswick Land and Lumber Company. The Quebec *Chronicle* urges the appointment of the Hon. H. G. Joly to represent the interests of Quebec province. The *Star* backs the *Chronicle's* nomination. Why not appoint him for the Dominion? So asks the Ottawa *Free Press*.

The Clyde Trustees, on account of increase of traffic for several years past, but last year especially, have decided to take steps for the erection of new wharves on north and south sides of the river, two on the north and two on the south (west of Kelvin), the entire length of the whole amounting to about 3,000 lineal yards. There is also to be erected a passenger wharf at Dalmuir. Mr. Deas, engineer to the Clyde Trustees, has furnished all the plans.

The *London Free Press* says:—A letter writer is informed that the firm in Quebec which has made the most money this year in wood is one which sends a member to South Africa, who goes from place to place picking up small orders, which have been shipped, so Quebeckers say, at prices which have made the business a small bonanza for the firm. Enterprise brings its own reward, always. Quebec would not be the "Sleepy Hollow" it is were its citizens generally more enterprising.

The application of a spring or suspended weight to shutting a door makes that shutting noisy. To remedy the evil, two German mechanics have invented a pneumatic device, wherein the act of opening the door moves a piston away from a suction valve, causing air to be drawn freely through the latter. As the door is closed the piston returns, and the air has to escape, but can only do so by an aperture much finer than that through which it entered; hence a brace-like action on the door.

The following number are a fair illustration of the progress of our plant knowledge: Hippocrates described 234 species; Theophrastus followed with 500; Pliny knew 800. Tournefort, at the beginning of the last century, described 10,146. Many of these were bad species and as such rejected, so that at the death of Linnaeus 7,294 were accepted. De Candolle made in his "Theory of elementary botany," 30,000 species. Lindley, in 1853, gave the number as 92,920. Now nearly 150,000 species are known, with possibly an equal number not yet known.

The *Lumberman's Gazette* says:—The forest product of the United States exceeds in value annually any other single crop. The annual yield in raw material—such as lumber, fuel, bark, etc.—at a low average, reaches fully $800,000,000 in value. In view of this enormous source of weath, and the necessity of preserving and perpetuating it as far as may be possible, it is the duty of the general and state governments to use all the means in their power to preserve our forests, and prevent the useless waste and destruction of timber, especially on the public lands.

The Copland system of asphaltic wood pavement, introduced in London, is claimed to meet some of the most important requirements for the purpose which have hitherto been unfulfilled and, though more costly at first than some other methods of roadway construction, its durability and satisfactory wear more than meet that point. The advantage of simplicity is at once presented, namely, a bed of concrete, with a layer of asphalt over it, upon which are laid transverse courses of red pine blocks, with intermediate spaces; those spaces are filled in partly with heated mastic asphalt, and then with coarse lime and gravel grout flushed with hot air, to the surface of the roadway. Finally, about an inch of rough gravel is spread over the whole, and left to be worked in and compacted by the ordinary effect of traffic.

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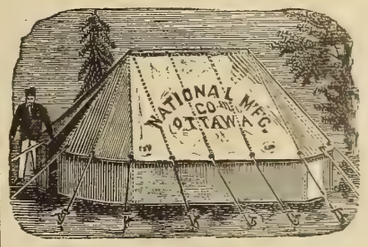
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Market Reports.

TORONTO.

From Our Own Correspondent.

JAN. 9.—Trade is decidedly flat here, the holiday season combined with the severe weather have completely flattened out all building operations for the present, and it is doubtful if there will be much alteration before the opening of spring. In consequence of the plasterers' strike several important jobs remain unfinished, and contractors do not feel like tendering on any new work until the present uncertainty is ended. Many of the strikers are trying to secure contracts on their own account, but property owners do not feel like giving out contracts to men of straw under the present lien law, as they may be called upon to pay twice over for the work, and therefore prefer, and I think rightly so, to let their work remain unfinished. How long this state of things will continue it is difficult to determine. In the meantime many of the families of such strikers are without the actual necessaries of life during this inclement season. The trade in cordwood is brisk, and but little except green wood is to be obtained, large quantities of which is daily arriving and commands ready sale. Quotations at the yards for what little is selling remains the same, and bill stuff of which there is never any glut, will remain firm throughout the winter—18, 20 & 22 ft lengths hard to be got:

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
Scantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 50
Three uppers, Am. inspection	35 00@45 50
B. M.	
1¼-inch flooring, dressed	32 00
1¼ " " rough	16 00
1¼ " " dressed	26 00
1½ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅝ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ₩ M	3 00
Sawn Lath	2 50

MONTREAL.

From Our Own Correspondent.

JAN. 9.—Since last report we have had steady cold weather with plenty of snow for work in the woods. Some of the manufacturers still claim that there will be a much smaller quantity of logs turned out this year, and that the probability is that prices will stiffen a little by and by, and although they are anxious to sell their lumber now, they do not care about cutting prices. The feeling in the trade is much better than it was in November last, and although there have been failures among the parties consuming lumber they have not been so numerous as was feared in the fall, and people generally have more confidence. Business is still very quiet and people do not appear to have got over the Christmas holidays and stock taking. Prices are steady and unchanged. We quote ex yard :

Pine, 1st quality, ₩ M	$35 00@40 00
P ne, 2nd " ₩ M	22 00@24 00
Pine, shipping culls, ₩ M	14 00@16 00
Pine, 4th quality deals, ₩ M	11 00@12 00
Pine, mill culls, ₩ M	10 00@12 00
Spruce, ₩ M	10 00@13 00
Hemlock, ₩ M	9 00@10 00
Ash, run of log culls out, ₩ M	20 00@25 00
Bass, " " ₩ M	17 00@20 00
Oak, ₩ M	40 00@50 00
Walnut ₩ M	60 00 100 00
Cherry, ₩ M	60 00@80 00
Butternut, ₩ M	35 00@40 00
Birch, ₩ M	20 00@25 00
Hard Maple, ₩ M	25 00@30 00
Lath, ₩ M	2 50@ 2 75
Shingles, 1st, ₩ M	3 00@ 0 00
Shingles, 2nd, ₩ M	2 50@ 0 00

CORDWOOD.

There has been a fair steady demand for wood during the past two weeks at firm prices, which are likely to advance, as the Canada Pacific Railway have raised the rates of freight for wood from $11 to $15 per car load. Prices on the wharves have not yet been changed. We still quote prices from the wharves ex cartage as follows :

Long Maple	$ 6 50
Short "	6 00
Long Birch	5 50
Long Beech	5 00
Tamarack	5 50

WINNIPEG.

The Winnipeg *Commercial* of Jan. 1, says : There is very little doing and not likely to be much till towards spring. Quotations are as follows :—Pine lumber, 1st, common boards, dressed, $26.50 ; 2nd, dressed, $25.50 ; 1st, do rough, $26.50 ; 2nd, do., $25.50 ; sheathing, rough, $25 ; timber, 16 feet and under, $24 ; do. over 16 feet, for each additional 2 feet, $1 ; dimension and joists 16 feet and under, $24 ; do. over 16 feet for each $1 ; fencing, $25 ; 2 and 3 inch batttens, $30 : A. stock boards, all widths, $50 ; B. do., $45 ; C. do., $40 ; D. do., $35 ; 1st clear. 1, 1¼, 1½, and 2 in, $60 ; 2nd do. $56 ; window and door casings, $50 ; base boards, dressed, $50 ; 1st pine flooring, siding and ceiling $40 ; 2nd do $35 ; 3rd do., $30 ; ½ inch split siding, dressed, $30. Spruce lumber —timber 16 feet and under, $22 ; do. over 16 feet, for each additional 2 feet, $1 ; dimensions and joists, 16 feet and under, $23 ; do. over 16 feet, for each additional 2 feet, $1 ; boards, 22 ; 1st flooring, siding and ceiling, $28 ; XX shingles, $5.25 ; Star A shingles, $3.25 ; X shingles, $5.00 ; A do. $4.50 ; lath $4.50.

ALBANY.

Quotations at the yards are as follows :—

Pine, clear, ₩ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	45 00@50 00
Pine, good box	22 00@33 00
Pine, 10-in. plank, each	00 42@00 46
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 21
Pine, 10-in. boards, 16 ft., ₩ M	28 00@32 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	18 00@20 00
Pine, 1-in. siding, select	43 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1½-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ₩ M	40 00@43 00
Ash, second quality, ₩ M	25 00@30 00
Cherry, good, ₩ M	60 00@85 00
Cherry, common, ₩ M	25 00@35 00
Oak, good, ₩ M	40 00@43 00
Oak, second quality, ₩ M	20 00@25 00
Basswood, ₩ M	25 00@30 00
Hickory, ₩ M	40 00@40 00
Maple, Canada, ₩ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ₩ M	38 00@40 00
Shingles, shaved, pine, ₩ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 4 90
" clear, "	0 00@ 3 30
" cedar, mixed	0 00@ 3 50
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ₩ M	0 00@ 2 75
Lath, spruce, "	0 00@ 3 00

BOSTON.

Cotton, Wool and Iron of Jan. 5, says :—The general market is seasonably quiet, and the recent snows have put a damper upon outside operations. Pine lumber is quiet and steady, with a moderate demand, and with dry uppers scarce and commanding a fair price. Clapboards are in good request. Hemlock boards are pretty steady, and spruce is well sustained. Southern pine continues low and dull, with a small call. Hardwoods are quiet, but not particularly changed.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

BUFFALO.

We quote cargo lots :—

Uppers	$46 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

CHICAGO.

The *Northwestern Lumberman* says :—Business is in about the same condition as that of last week. The outward movement is at a minimum. There is no expectation of any increase until after New Year's. Many are closing up the year's business and taking account of stock. The weather lately has been very much all sorts, and unfavorable to doing anything in town or county. Christmas has broken up the week, and altogether affairs are as near a standstill as they could be and move at all. The side-tracks in the yards were never more bare of cars. A few yards report considerable shipping ; one claiming to send out 25 car loads some days. One house reports a December business of 3,000,000 feet ; another of 2,500,000. It will thus be seen that lumber still "do move," in spite of the average dullness.

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

LONDON.

The *Timber Trades Journal* Dec. 22nd, says : The absence of any public sales of timber will be felt as a relief, just new especially, and the interval may greatly assist prices—it certainly can do them no harm. The holidays can be no obstacle to the market prevailing, although any lull in the activity of the dock deliveries will make the stocks all the more formidable when their comparative proportions are finally made up. But the reaction is sure to come, and the consumption be all the more rapid from the interruption. The winter so far has been an open one, and we apprehend that all the ships chartered a month ago have completed their voyages, and there is not much likelihood of stocks sold, at least in considerable quantities, wintering over at the place of shipment.

Doubtless all have been equally fortunate in selling out, but the expected low freights at the close of the shipping season greatly stimulated the demand, and gave those who had been holding through the summer another chance of meeting the market, of which it seems they were not slow to avail themselves. The small difference that now exists between the dock stocks of the present and past years, and which will probably be still further lessened ere the final summary is made, can be attributed almost entirely to the opportunity the cheap freights presented of sending goods forward at favorable terms. With the norml rate of freight ruling for the fall, probably the difference between the 1883 and 1882 stocks in the docks here would have been several million pieces in favor of the latter on deals alone, while the augmentation to the flooring stocks, which has turned the scale against those of 1882, is also due to a cheap rate of tonnage.

GLASGOW.

The *Timber Trades Journal* of Dec. 22 says : The imports of wood goods to Clyde during the past week have been about 8,000 loads, and comprise four cargoes of Quebec timber at Greenock.

There have been no public sales to record, which might be expected at this season, and especially as the result of recent auctions, showed there was little business to be done meantime.

There has been a larger import than usual, both of logs and deals, to the Clyde the year, and stocks on hand to be made up in a week or two will, it is expected, be comparatively heavy. The increase this year consists principally of Quebec pine.

The import of yellow and red pine logs to the end of last month was about 61,000 logs, as compared with 39,000 in 1882 (corresponding period) and 51,000 in 1881 ; of oak, elm, and birch this year, 16,000 ; 1882, 13,000 ; and 1881, 19,000 logs.

The number of deals imported this year from Quebec and lower ports show a marked increase over the two previous years, but is under the import of 1880. The importation of pitch pine has been comparativly moderate, being represented by a carrying tonnage of about 35,000 tons to the end of November, which is considerably under the two preceding years.

NORWAY.

CHRISTIANA, Dec. 15th. 1883.—We have had an extraordinary mild autumn this year, with a great deal of rain. The fields have kept green, flowers have bloomed in the gardens as late as November 29th, and I have even seen a report in one of our newspapers to the effect that a strawberry plant in full bloom, and with one berry nearly ripe, had been sent to the editor in the first week of December. However, this month commenced with frost, the thermometer showing on one or two occasions as much as 10 deg. Celsius below zero. This lasted for about a week, when mild weather again followed, with falls of snow and rain alternately. It is fortunate for the "driver" in the forests, when there happens to be a good frost before any fall of snow, because the marshes in that case more easily become passable than when a layer of snow (being a non-conductor) necessitates a severe cold to have the desired effect. In some parts it appears that the wished-for result took place, without having again been lost by the recurrence of milder weather, but it can hardly be said to be the case generally.

As the hay crops have been plentiful, both this year and the preceding one, horses for the transporting of wood are likely to be available on moderate terms, and I believe the case is similar as regards labourers for the forest work. Consequently the "driving" will be cheap, provided frost and snow are not going to strike. Another reason why cheapness is likely to prevail is this, that it is pretty certain that the number of logs will not be large, the cutting having begun very late,

If the production of this country had any serious influence upon the general wood market, it would be easy and safe to predict an improvement in prices for next year. Unfortunately it is not the case, but we must hope that our Swedish brethren will not again overload the market with an abundance of stuff next year ; it is mainly on their own moderation in that respect that the earnest future of the wood market depends generally speaking.

The persual of the wood market reports from England for the month of November has not been cheering to the hearts of our shippers. Prices for floorings in the London auctions have been going from bad to worse, and stocks of planed wood are larger than the heavy ones last year, both in London and in Liverpool. It is not unlikely, under these circumstances, that our manufacturers of floorings and matchings will endeavor to decrease their production regularly, until more favourable times may return. This seems a better plan than to go on doing a large business with no profit, but perhaps at a loss occasionally. If we examine the results of the London public sales, during the present year, of Norwegian wood goods, it is impossible to repudiate the fact that there must have been losses on the same to a considerable extent, sustained either by importers, if the goods were sold beforehanp, or by shippers, if they were consigned. I make out the average prices realized during the summer and autumn to be for floorings : 1st red, about £9 10s. ; 2nd red, about £8 10s. ? 1st white, about £8 7s. ; 2nd white, about £7 17s.

As regards prices of Norwegian battens, those realized in the autions have been ridiculously low, from £3 5s. to £6 per standard, and only in a few cases up to about £7 for 2 x 4 red.

Until quite recently sales of seasoned battens have been effected on the spot at fairly good prices, viz., about ½5 15s. for aed, £5 to £5 5s. for white 2nds and 3rd, with 4ths at about £1 reduction. These prices are delivered on railway trucks at Christiana, and the Fredrikstad and Dramman mills have to pay freights and charges in addition, I fancy, however, that it is now difficult or probably impossible to place battens at these rates, at the same time as some holders ask even a good deal more.

I have not heard of any sales of floorings for next year, and only of a very few cargoes of spars and poles having been placed at barely last year's prices.—*Timber Trades Journal.*

RAILROAD TIES.

"The railroads of this country," said an official of one of the trunk lines running out of New York, "pay nearly $6,000,000 a year for cross-ties. The timber used is oak and chestnut in the East, and oak, cherry, locust, maple, and ash in the West and South. The best ties are made of white oak. More than 225,000 acres of forest are needed to supply these ties every year, and consequently the necessities of railroads in this one item alone form a considerable item in the destruction of our forests. The country along the line of our road alone annu-

ally supplies us with hundreds of thousands of oak and chestnut ties, and thus far we have not been compelled to go out of our own district for our supply. One county in Pennsylvania alone (Pike) furnishes a large proportion of our ties, and has for many years. There is not a station in that county that is not a supplying depot for ties. I have often wondered where they all come from, for the contractors who operate in that county, after more than 24 years' chopping and hewing in her forests, never hesitate to contract for the delivery of as many ties as are called for. They are brought in as far as twelve miles from the railroad. Besides the large number that we annually receive, there is a railroad on the other side of the county which also depends on Pike county for a large share of its ties. For more than 20 years also, up to the time that we adopted coal instead of wood as fuel, Pike county furnished the road with many thousands of cord wood every year—oak, chestnut, pine, beech, birch, maple and hickory. Besides these drafts on her woods, the county's best young chestnut trees have been cut for more than 30 years to help us in renewing our telegraph poles.

"Railroad ties need renewing every three years. In building a new road the estimate is 2, 700 ties for the mile. It is safe to say that it will require 300 ties a year to keep a mile of road in repair. From 12,000,500 to 1,000,000 new ties are required by the railroads every year. In building the great Western railroads, the contractors, in many cases, purchase outright the timber along the route, or as near to it as possible. In that case they pay $20 to $25 an acre. Otherwise they pay from ten cents to twelve cents a piece to the owner of the land for the ties taken out. The average price paid to the tie contractor is 35 cents a piece, although we have paid 45 cents and even 50 cents for the best oak ties. We prefer hewn ones to sawed ones, and use no others, but many railroad men do not believe in the theory that they are any better. It may be only a superstition that the former last longer than the latter, but, if it is, it is so strong with us that we insist on having hewn ties. Of late years we have taken a great many hemlock ties, experiments proving that they can be used to advantage in many instances, on sidings and on tracks where the traffic does not require constant repairs."

TREES OF MADAGASCAR.

The soil of Madagascar is very fertile and produces rice, mamok, sugar cane, pepper, cotton, indigo, tobacco, as well as a number of medicinal herbs. A chain of high mountains divides the country into several well-watered valleys. The most beautiful feature in the island is the imposing forests, which extend over a distance of 9,000 miles and contain fine and valuable trees, covered with rare climbers and orchids. Among the trees are found pandanas, acacia, sago and the cocoanut, but above all the ravinda(*Urania speciosa*), which of itself forms large forests. The Rev. W. Ellis says of this tree: "It springs up with a thick, juicy stem similar to the banana (*Musa sapientum*); in the centre of it are broad leaves which resemble the banana, but are less brittle. The leaves surround the stem in rows on opposite sides, and by increasing and leaning over those underneath the tree assumes the shape of a large open fan. I have counted on more than one occasion 20 to 25 leaves on one tree. The stock of the leaves is from six to eight feet long, while the broad leaf itself is from four to six feet long. The bright green leaves, extending themselves like a fan, form the most beautiful plant that can be imagined." But it is not only for its beauty that the tree is remarkable. It is used for many purposes in the same way as the palm tree in the Arabian desert; but one of its most important properties is that during the dry season it contains a large quantity of fresh and pure water, and is thus a refreshing spring for the thirsty traveller. The reservoir is situated at the base of the stock of each leaf, and upon being opened a stream of cool and sweet water appears. The natives use the leaves of the tree to cover the houses, and the bark for flooring. At most of the markets there are sold articles made from these leaves, comprising plates, dishes, tablecloths, napkins, etc., an even spoons and tumblers, but for these last articles the leaves are specially moulded.—*India Mercury.*

A Nice Piece of Wood.

The widest piece of lumber that ever came into Chicago was recently received at the Lumberman's exchange. It is of California red wood, fifty-two inches wide, three inches thick, and fourteen feet long.

Forestry in the Disputed Territory.

A Winnipeg correspondent says:—When the Privy Council awards the disputed territory to our province or the other, among the earliest measures to be considered should be a way of enforcing forestry laws in north-western Ontario or south-eastern Manitoba—whichever it may prove to be. The country is to a great extent so rocky that should the timber be once cleared away from its surface it will never grow again. No better chance for putting into practice the advice contained in Mr. Phipps' excellent pamphlet could be found. The saw mills returns for Manitoba and Keewatin, up to October 31st of last year, show some 30 huge mills in operation throughout the province and Keewatin during the year. The returns show 25,465,841 feet B. M. of lumber manufactured during the year, 6,442, 182 feet of shingles, and of lath 2,251,100 feet. Gratifying as the returns are in themselves, there is no doubt that the country is being shorn of its timber indiscriminately, and will soon be deforested unless the milling operations are controlled. The country is at that stage when a law preserving alternate strips of forest, or presenting some limits to timber slaughter could effect what never can be accomplished when once the wood is gone.

Forests Reproduced.

Attention has lately been called to the fact that the numerous small prairies that were common in the Wabash basin at the time of its first settlement have become transformed into woodlands, and that owing to this gradual change of prairie to forest, the actual forest area of some of the counties of southern Illinois is greater at present than fifty years ago. Extensive woods of oak and hickory more than eighty feet in height, and with trunks of nearly two feet in diameter, are now growing on what was open prairie within the memory of some of the present owners of land. This is interesting as a slight indication of the solution of the mystery which involves the origin of the prairies, while the rapidity with which these new woods have sprung up shows that the reproduction of our failing forests can be accomplished in a shorter time than is generally supposed, if proper consideration and attention can only be given to the subject.—*Lumber World.*

New Michigan Logging Railroad.

The Ludington, Mich., *Appeal* says that Butters & Peters' new logging railroad, lately completed, is doing excellent work. The road begins near the Crystal Valley postoffice, in Oceana county, and runs in a northeasterly direction to the south branch of Pere Marquette river, the whole distance being through an almost solid body of pine. For several miles the road runs through pine owned by T. R. Lyon, the right of way having been given provided the projectors of the road banked free of cost such timber as it was necessary to fell in order to construct the road bed. The banking ground of the road, on the south branch, is on a high bank, along which the rails are laid, so that it is only necessary to roll the logs from the cars, when they go rushing into the stream without trouble.

Manitoban Railways.

The following contract from the Winnipeg *Commercial* shows that Manitoba is not badly off for railways for a new country:—There are now 935 miles of railroad in operation within the borders of the Province of Manitoba. During the past season the Selkirk branch, 25 miles in length, has been completed and is now in operation; the C.P.R. Southwestern has been completed to Manitou, and a loop line constructed from Buffalo junction to Emerson, a distance of fourteen miles. The Manitoba and North Western Railway has been completed and is now in operation from Portage la Prairie, a distance of ninety-eight miles. About fifty miles of the Souris Rocky Mountain Railway between Melbourne and Rapid City have also been graded.

It has been estimated by lumbermen who have been on the upper Mississippi that not over two-thirds as many logs will be cut this year as last.

INDICATIONS from Wisconsin point strongly to the fact that there will be no reduction in the the lumber cut in that state. In fact many of the heavy lumber firms there will greatly exceed their former output.

Spider Life Wonders.

In a lecture in the Lowell Institute Professor Wood dealt with the phenomena of spider life. The female is larger and much fiercer than the male, who while paying his addresses is in constant peril, frequently losing some of his legs. In one tribe the female is 1,300 times as large as the male. The spider's thread is made up of innumerable small threads or fibers, one of these being estimated to be one two-millionth of a hair in thickness. Three kinds of thread are spun: One of great strength for the radiating or spoke lines of the web. The cross lines, or what a sailor might call the ratlines, are finer and are tenacious, that is, they have put upon them little specks or globules of a very sticky gum. These specks are put on with even interspaces. They are set quite thickly along the line, and are what, in the first instance, catch and hold the legs or wings of the fly. Once caught in this fashion the prey is held secure by threads flung over it somewhat in the manner of a lasso. The third kind of silk is that which the spider throws out in a mass or cloud by which it suddenly envelopes any prey of which it is somewhat afraid, as, for an example, a wasp. A scientific experimenter once drew out from the body of a single spider 3,480 yards of thread or spider silk—a length a little short of three miles. Silk may be woven of spider's thread, and it is more brilliant and glossy than that of the silk worm, being of a golden color. An enthusiastic entomologist secured enough of it for the weaving of a suit of clothes for Louis XIV.

Twenty Labourers Run Down by a Train.

BRINTON, Pa., Jan. 10.—Fifteen or twenty men employed in clearing the snow from the railroad track were at work about seven o'clock last evening, in a cut just east of here, when an accommodation train rounded the bend. Before the men could get out they were run down by the train. It backed up, and the dead and dying were seen scattered along the track for fifty yards. The bodies of two men were found badly mangled, with life already extinct. Five others were badly injured and one has since died. After the accident the men crawled out of the snow in all directions. It is feared the bodies of others may be discovered. The accident was caused by the failure of the men to have a look-out to warn them of the approach of trains. It was dark, and locomotives near by with steam escaping made it impossible to hear the coming train.

JONES & SON,

Wholesale Lumber & Timber Dealers

39 Broadway, NEW YORK.

Oak, Ash, Cherry, Black Walnut, Poplar, Butternut

And all other Kinds of HARDWOOD LUMBER.

White and Yellow Pine Lumber and Timber.

Oak Ship Plank and Timber. Pine Deck Plank and Ship Stock Generally. L7

J. S. MAYO

IMPORTER AND MANUFACTURER OF

MACHINE OILS

OF EVERY DESCRIPTION.

9 Common Street, Montreal.

AMERICAN LUBRICATING OILS A SPECIALTY.

As I carry the LARGEST and BEST assorted Stock of OILS in the Dominion, I am prepared to fill all orders Promptly and at

LOWEST MARKET PRICES.

1yL20

A PRIZE Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All, of either sex, from first hour. The broad road to fortune opens before the workers, absolutely sure. Address TRUE & Co., Augusta, Maine.

The William Hamilton Manufacturing Co'y

MANUFACTURERS OF (LIMITED,)

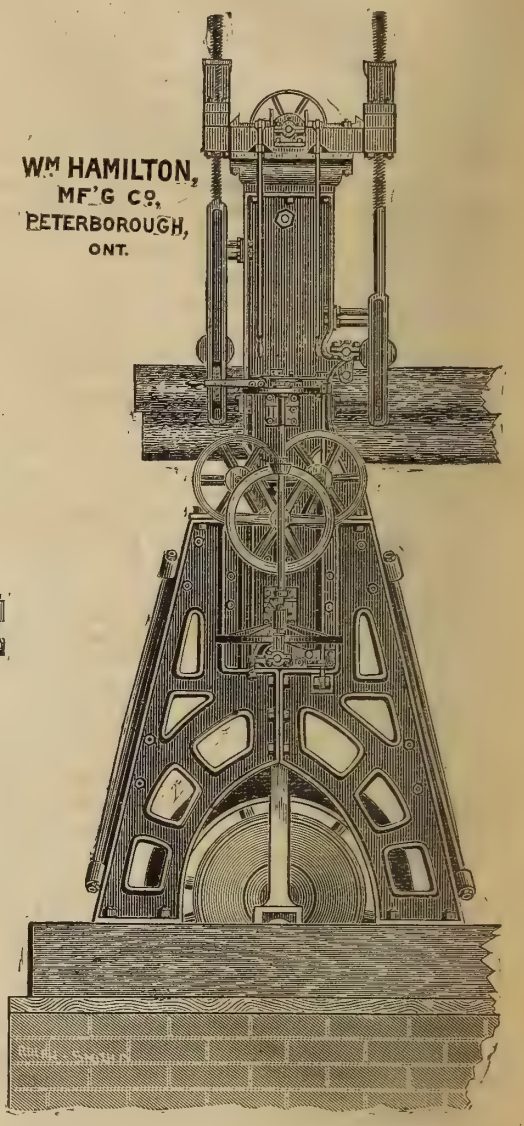
Saw Mills and General Machinery

PETERBOROUGH, - - - ONTARIO.

We introduce to the Lumbermen of Canada our New IRON GANG, which will be seen by the cut is in itself a complete and independent Machine, resting on its own foundations, having all the Machinery for operating, feeding, &c., directly attached.

The advantage of this over even a well built ordinary Gang in the mill frame is evident. No settling out of line, no yielding and springing of timber, while a much greater working speed is obtained. It has the most improved style of oscillating motion, it has the Press Rolls operated by power, and it possesses generally all the good features of best American Gangs, with heavier frame work and heavier shafting, all with a view to rapid, steady & correct working. A good look at one of these massive machines satisfies the sawmill man that they are in every way capable of continuously performing heavy duty throughout the season.

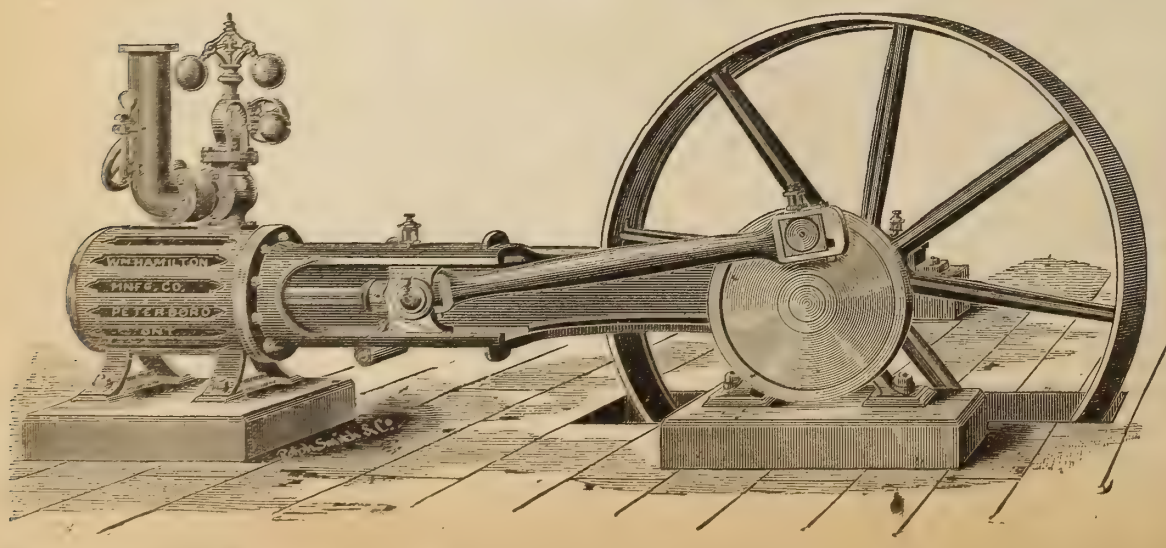




☞ *We make these Gangs one of our specialties and manufacture them of different sizes.*

—ALSO—

ENGINES AND BOILERS.



This cut represents our **SAW MILL ENGINE**, of which we make the following our Standard sizes, 12x16, 16x20, 18x24, and 24x30, built Strong and Substantial for Heavy Work. The Piston Rod, Cross-head Pin, and Wrist Pin, are made heavy and of the best steel; the Connecting Rod has solid ends and is tightened up by screw and wedge, avoiding all danger of keys getting out; the Slide Valve has a simple balance valve, requiring no attention from the Engineer, as it is self-adjusting. The Engine Shaft and Fly Wheel made very heavy. Belt Pulleys put on when required in place of Fly Wheel, and all regulated by the Judson Governor.



THOS. GRAHAM & Co.,

File Manufacturers

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150 FRONT STREET EAST

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FILES FOR SALE. FILES RE-CUT

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MANUFACTURERS OF

STAR RIVET

LEATHER BELTING

70 King Street East, Toronto.

SPECIALTY:—Belting made from J. B. HOYT & Co's American Oak Tanned Leather. Send for Price List and Discounts.

EAGLE FOUNDRY!

GEORGE BRUSH

14 to 34 King and Queen Sts, MONTREAL,

MAKER OF

Steam Engines, Steam Boilers, Hoisting Engines, Steam Pumps,

CIRCULAR SAW MILLS, BARK MILLS, SHINGLE MILLS,

Water Wheels, Mill Gearing, Shafting, Hangers and Pullies,

Hand and Power Hoists for Warehouses &c., &c.

Also, Sole Manufacturer of BLAKE'S CHALLENGE STONE BREAKER.

AND AGENT FOR 1yl21

"Water's" Perfect Steam Engine Governor, and "Heald & Sisco's" Centrifugal Pumps

EXTRA HEAVY AMERICAN

Oak Tanned Leather Belting.

RUBBER BELTING, RUBBER PACKING, RUBBER HOSE, LINEN HOSE and COTTON HOSE.

A Full and Complete Stock always kept on hand. WRITE FOR PRICES and DISCOUNTS.

We have the Largest and best equipped RUBBER FACTORY in the world for the manufacture of VULCANIZED INDIA RUBBER GOODS for Mechanical Purposes.

Our trade here has increased to such an enormous extent that in order to keep up with the demands, we have purchased from Major John Gray, M.P.P., Parkdale, the plot of ground situated on West Lodge Avenue, adjoining the Credit Valley, Toronto, Grey and Bruce, Northern and Grand Trunk Railways, for the erection thereon of a BRANCH RUBBER FACTORY, works to be in full operation January 1st, 1884.

THE GUTTA PERCHA AND RUBBER MANUFACTURING CO.

T. McILROY JR.

WAREHOUSE:—10 and 12 King Street East,

P.O. BOX 556. 1l6m TORONTO.

MONTREAL AXE WORKS

MOCOCK & SON

St. Gabriel Locks, - Montreal,

—MANUFACTURERS OF—

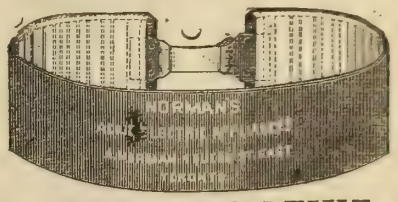
AXES and EDGE TOOLS

OF EVERY DESCRIPTION.

Old and Reliable, the Best Axes made in Canada.

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Established 1874.



Established 1874.

NORMAN'S ELECTRO CURATIVE APPLIANCES

RELEIVE AND CURE

Spinal Complaints, General and Nervous Debility, Nervousness, Rheumatism, Gout, Liver, Kidney, Lung, Throat and Chest Complaints, Neuralgia, Bronchitis, Incipient Paralysis, Asthma, Sciatica, Sprains, Consumption, Sleeplessness, Colds and Indigestion.

Ask for NORMAN'S ELECTRIC BELTS and you will be safe against imposition, for they will do their work well and are cheap at any price.

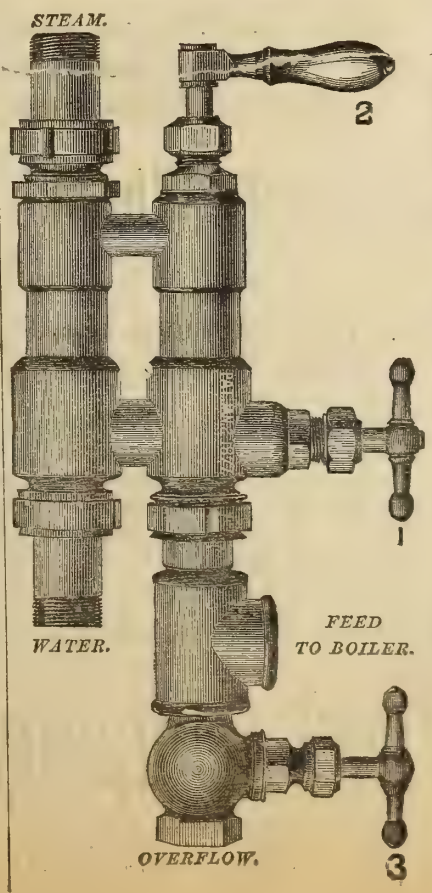
A. NORMAN, ESQ.—Dear Sir,—Please send me a waist belt. Enclosed find price. Head band I got for my wife has almost cured her of neuralgia. Yours truly,

C. L. TILLEY, WATERVILLE, N.B.

Numerous of such testimonials can be seen at my office, proving that they are doing a good work and worthy the attention of all sufferers. Circulars free. No charge for consultation.

A. NORMAN, 4 Queen Street East, Toronto.

NORMAN'S ELECTRO CURATIVE TRUSS is the best in the world. Guaranteed to hold and be comfortable. Circular free. N.B.—Trusses for Rupture, best in America, and Electric Batteries always on hand at reasonable prices.



THE

Hancock Inspirator

The Best Feeder known for Stationary, Marine or Locomotive Boilers.

THE INJECTOR PERFECTED!

All Sizes lift water 25 feet. No adjustment required for varying Steam Pressures.

Over 50,000 Now in Use.

MANUFACTURED BY THE

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5 CUSTOM HOUSE SQUARE,

MONTREAL, P.Q., CANADA.

Manufacturers of Inspirators, Ejectors, and General Jet Apparatus.

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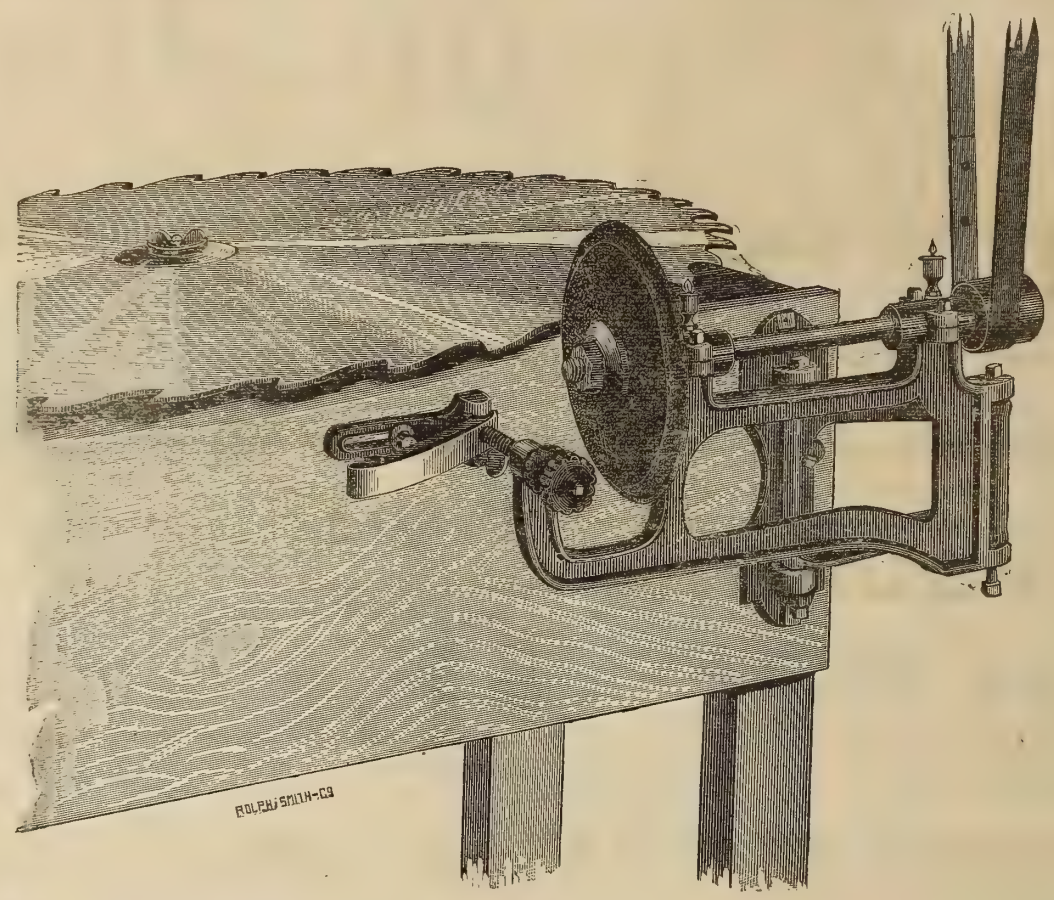
ROGERS' PATENT
SAW GUMMER and SHARPENER

The Handiest Machine for these purposes ever Invented.

Don't Heat!

Cheap!

Very Simple!



Accurate!

Works Fast!

Complete!

Lumbering Season, 1884

Saw Mill Owners in providing for the season of 1884, ought not to lose sight of ROGERS' SAW GUMMER, for it will save them more money in proportion to the amount invested than any other machine.

Only $30, including Emery Wheel; Table and Countershaft, $10 extra.

A few of ROGERS' SAW GUMMERS were put on the market last season, and we quote some of the commendations received:

JAS. HADDEN, Foxmead, says:—
"Your machine is all I expected."

CHAS. ANDERSON, Anton Mills, says:—
"I have given it a good trial, and am well pleased with it. "I find it is one of the indispensables in a saw mill." * *

ROBT. R. WEIR, Orillia, writes:—
"It works like a charm, and is very accurate in its work."

CRONE & PATTON, Hoc Roc Mills, Gravenhurst, says:
"The Rogers' Saw Gummer purchased from you gives "good satisfaction, * * it cannot be beat."

D. DAVIDSON, Pentanguishene, writes:—
"We are well pleased with the Gummer."

W. W. BELDING, Wyevale, writes:—
"I have the Gummer running and it is giving good "satisfaction."

ADDRESS ALL ORDERS TO THE

Hart Emery Wheel Company, Limited - Hamilton, Ont.

☞Manufacturers of Hart's Celebrated Patent Wire Strengthened Emery and Corundum Wheels.

COMBINED CLIPPER AND PLANER TOOTH SAWS

PERFECTLY INTERCHANGEABLE.

A 60-Inch Saw can be changed from Points to Clipper Teeth or vice versa in ten minutes.

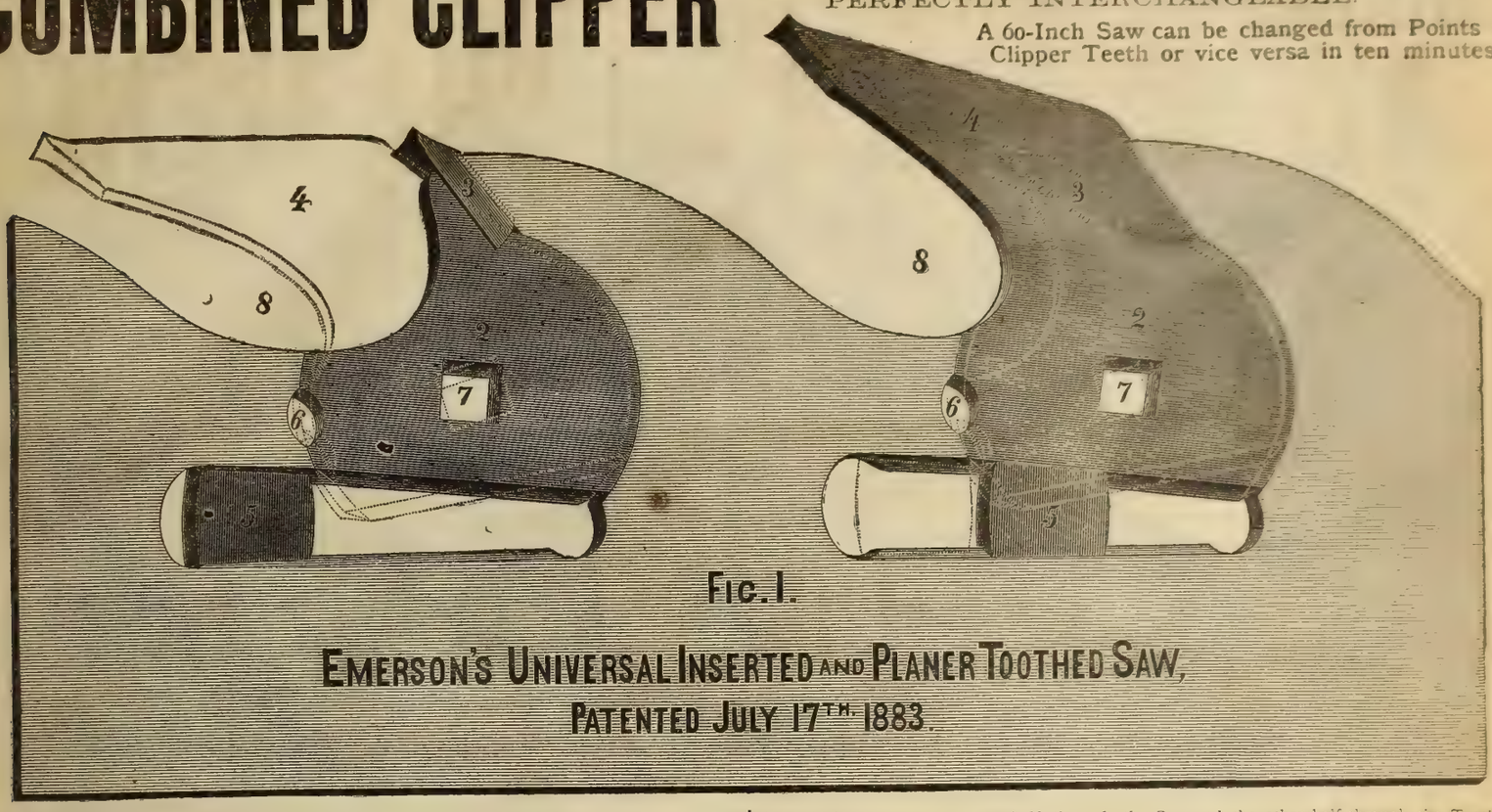


FIG. 1.

EMERSON'S UNIVERSAL INSERTED AND PLANER TOOTHED SAW,

PATENTED JULY 17TH, 1883.

Fig. 1 represents an *Exact Full Size* section of a 60-inch Circular Saw with 46 teeth four inches apart.

2, 2 are the mouth-pieces for holding the Planer Teeth; one being represented in dotted lines over the Inserted Tooth.

3, 3 shows the Planer Teeth, one of them being in position.

4, 4 shows the Inserted Teeth, one in position and the other in dotted lines the position that the tooth will be in when it is being inserted into the socket.

5, 5 shows the Wedges; one forced up into position for holding the Tooth or Mouth-piece; the other one is represented back in the recess as it will be when the Mouth-pieces or the Teeth are being inserted.

Fig. 6, 6 show recesses cut one-half through the Saw and the other half through the Tooth or Mouth-piece for the upper portion of the front end to pass through when inserting them in the Saw.

7, 7 show square holes through the Mouth-pieces and teeth made to admit a Steel Lug attached to a Tapering Key for removing and replacing them.

8, 8 show the full size of Dust Chamber when as an Inserted Tooth or a Planer Saw.

☞It will be seen that the Dust Chamber in this Saw contains more space than any other Saw of equal size and number of Teeth, Solid Saws not excepted.

EMERSON'S NEW PATENT UNIVERSAL SAW.

Being adapted for both heavy and light feed for all climates, in both hard and soft timber (for our largest saws, teeth are inserted as close as 4 inches from point to point) possesses more advantages than any other saw in the world. We ask practical sawyers and lumbermen to carefully examine the above illustration and description. You will see there are no rivets to be headed up in fastening teeth, nor to be driven out in removing them. Neither teeth nor mouth pieces can fly out without breaking the saw, so that they are perfectly safe. If you buy an Inserted Toothed Saw of this kind, and at any time you wish to convert it into a Planer Saw, send us a set of worn out teeth, and for 15 cents each, we will make them into a set of mouth pieces for the same saw that they came out of, and for $17.50 additional we will send you 500 extra bits, and you will have a Planer Saw with no further expense. Twenty-five years in manufacture of Inserted Toothed Saws, and ten years of it in manufacturing our Celebrated Planer Saws, have demonstrated to us that for Frozen Timber, Pitch Pine or Hardwood, our Planer Saw has no equal. And for the softer timber and Heavy Feed, our Clipper Saws have no superior. For fast sawing it has always taken the front rank.

When the Clipper Teeth are in the saw, it will be two inches larger than when the Planer Teeth are in, and the Clipper Teeth will stand more feed than when the Planer Teeth are in it. If you purchase at once a saw with both kinds of teeth and mouth pieces, with 500 extra Saw Bits, you are at once fixed up for a winter and a summer saw, and for both Hard and Soft Wood. A 60 inch Patent Combination Saw can be changed from a Planer to a Clipper and *vice versa* inside of five minutes. In short, it can be changed in less time than any Inserted Tooth Saw in the world. Another and important advantage is, that if you have a sawyer who is experienced with any kind of Inserted Toothed Saw, you can furnish him the saw that he wants. Again, if at any time you are not fortunate in having an experienced sawyer, you can put in the Planer Teeth, and an inexperienced man can go right along with the sawing, and no time will be lost. If you have mixed timber to saw requiring wider or narrower points, (i.e. more or less set in the saw,) you can change in less than five minutes and go right along. If by accident the Clipper teeth get damaged or badly dulled by running into iron or grit you can put in the Planer Teeth and go right along; and the damaged Teeth be put in order at any convenient time.

DAMASCUS TEMPERED THIN SAWS!

American Manufacture! Solid or Inserted Tooth! 48 Inch Saws, 12 Gauge! 54 Inch Saws, 11 Gauge! 60 Inch Saws, 10 Gauge! All a Pronounced Success in Hard and Soft Timber!

☞PRICES REDUCED

OF DAMASCUS TEMPERED SOLID SAWS

On the 15th of January, 1884.

SEND FOR NEW DISCOUNT.

50 Inch 9 and 10 Guage Damascus Tempered Solid Saw

Used on 20 Horse-Power Champion Portable Saw Mill, running 400 Revolutions per Minute.

Waterous Engine Works Co. SOUTH INDIAN, ONTARIO, December 6 1883.

My new 10-guage Saw works splendid; it saves for me (over the 7-guage Saw) in every standard, 20 feet of lumber, and it runs smoother, cuts cleaner, can be run with one-half the pressure of steam that a 7-guage requires, and is easier kept in order. I would use no other than 9 and 10-guage Saws unless the saw is larger than 50 inches, then I would use thicker saws, according to their size. Several mill men have seen my saw run, and they pronounce it the lightest and smoothest running saw they have ever seen. I can save my labor for running the mill with a 10-guage Saw over the 7-guage.

Yours truly, S. F. CHENEY.

Address: Waterous Engine Works Co'y, Brantford, Canada.

AMERICAN SAWS:

We represent Four of the Best American Saw Factories

VIZ.

AMERICAN SAW Co.

Emerson, Smith & Co.

R. HOE & Co.

Hubbard, Bakewell & Co.

Inserted Tooth,

BIT TOOTH,

AND

SPECIALLY

THIN

SOLID SAWS

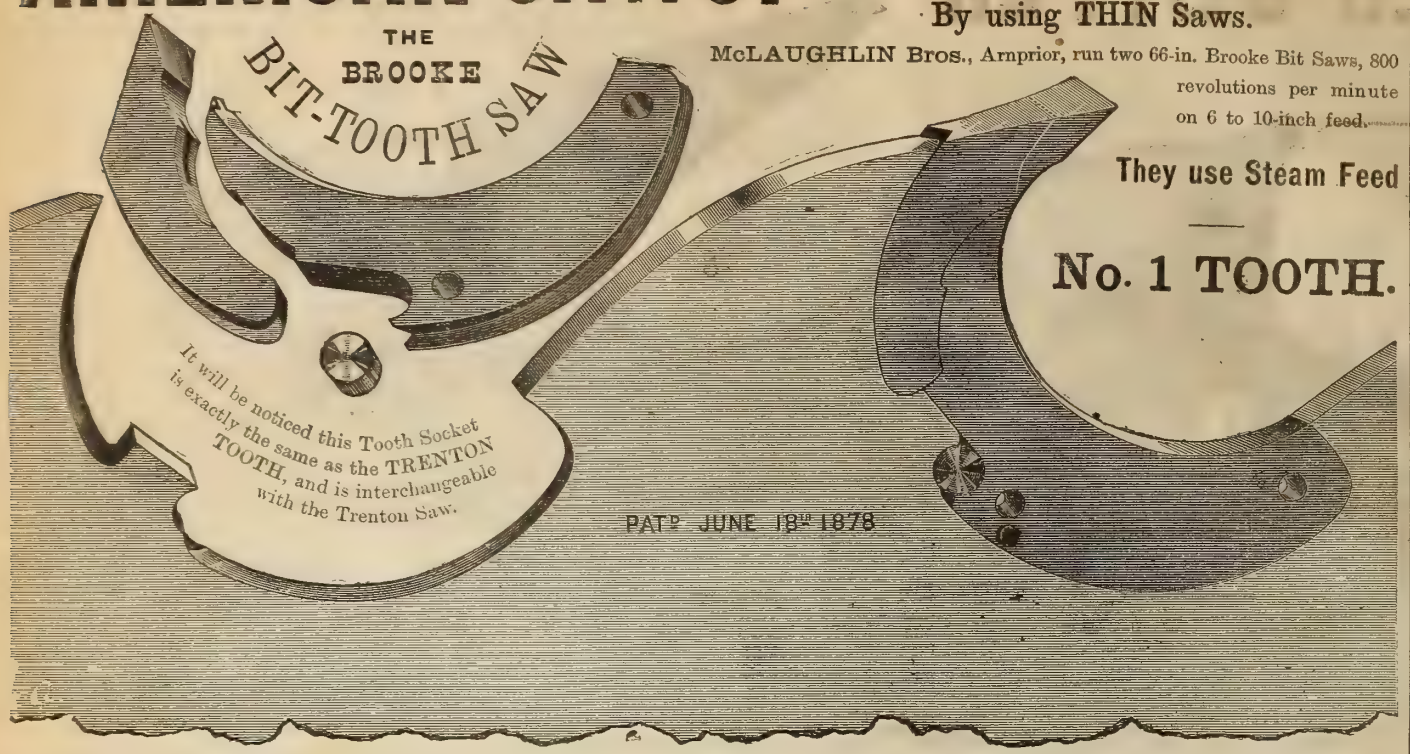
☞SAVE YOUR TIMBER

By using THIN Saws.

McLAUGHLIN Bros., Arnprior, run two 66-in. Brooke Bit Saws, 800 revolutions per minute on 6 to 10-inch feed.

They use Steam Feed

THE BROOKE BIT-TOOTH SAW



No. 1 TOOTH.

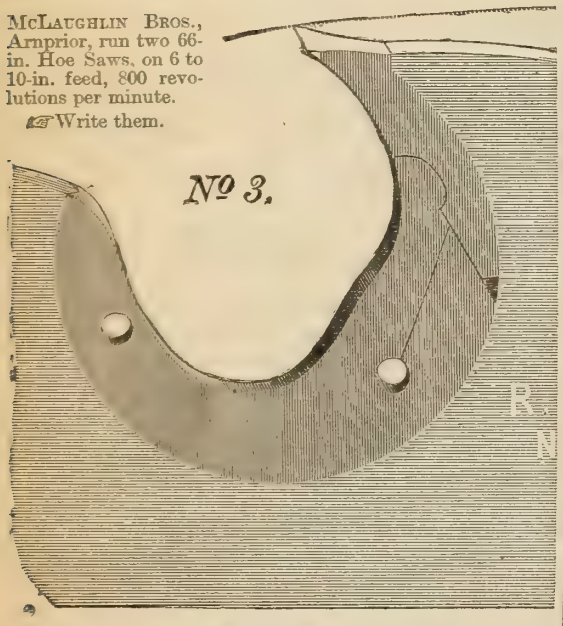
With this Saw you have either a Bit Tooth Saw or ordinary Inserted Tooth Saw, with teeth two-and-a-half inches long, both fit same socket and are interchangeable in a few minutes. These Bits require no gumming, and very little filing; are so firmly held that they will stand all necessary swaging, and can be worn down to dotted line shown in cut; they rest on lugs, saving the strain on the rim of the saw. For these reasons they will cut more and better timber at less cost than any other tooth. EXTRA BITS (per 100) No. 1. $9; No. 2,$8.— (per 1000), No. 1, $80, No. 2, $70.

Two sets No. 1 Bits have cut 500 m. feet pine, in 60-inch saw, running 800 revolutions per minute, on 6-inch feed. E. E. PARSONS, Arnprior.

We run 60-inch to 72-inch Solid Saws, as thin at center as 10 guage at rim—saving, over a 7 guage saw—1000 feet of lumber in every 25,000 cut.

McLAUGHLIN Bros., Arnprior, run two 66-in. Hoe Saws, on 6 to 10-in. feed, 800 revolutions per minute.

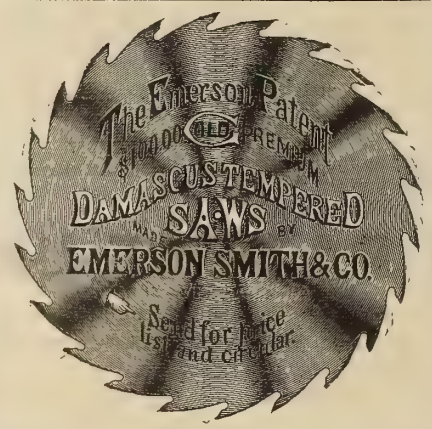
☞Write them.



HOE'S PATENT BIT SAWS.

One of the best Bit Saws made, above cut represents usual size tooth, one size larger and smaller made. ☞Send for particulars and prices.

SAVE TIMBER



GROW RICH

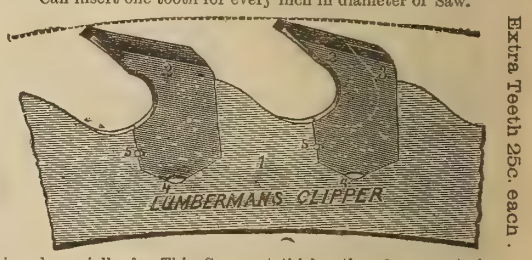
EMERSON'S EXTRA THIN SOLID SAWS

Having special facilities for the manufacture of extra thin saws for board mills, we are prepared to receive orders for Circular Saws as follows:—54 inches in diameter, as thin as 12 guage at rim and 11 at center, 54 to 56; 11 guage at rim, 10 at center, 66 to 72; 10 at rim, 9 at centre. Our unparelleled success with thin saws during past few years has induced us to recommend them to our customers. Our superior facilities are:—1st, Evenness of Temper; 2nd, Perfect Accuracy in Thickness, Saw balances perfectly; 3rd, Properly Hammered, to have equal strain in all its parts and at same time run true. This department is under the special supervision of J. E. Emerson, who has had 30 years experience and is without doubt the most successful circular saw maker in the world.

☞NO EXTRA PRICE FOR THIN SAWS.☜

EMERSON'S LUMBERMAN'S CLIPPER SAW

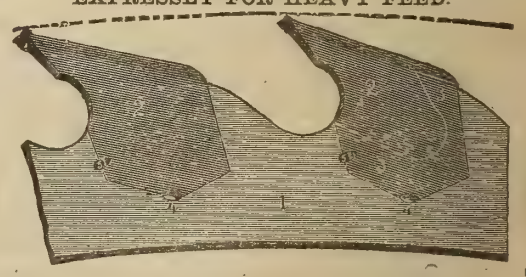
Can insert one tooth for every inch in diameter of Saw.

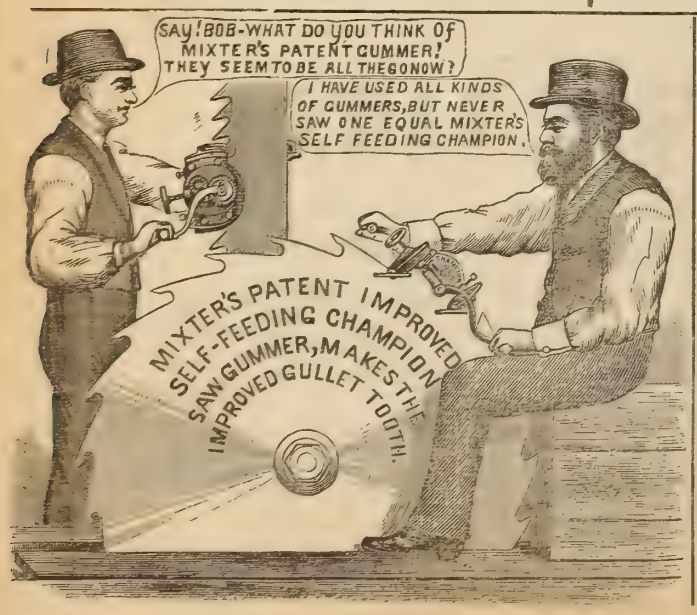


Designed specially for Thin Saws not thicker than 6 gauge at rim, or thinner than 15 guage at rim.

The CLIPPER FLANGE SAW

EXPRESSLY FOR HEAVY FEED.





Alligator Jaw Wrenches

5 sizes, grip from ⅛ to 3 inches, Iron. Solid Steel Jaw. Price 50c. to $5 50.



Cut represents No. 1. Larger sizes have Solid Handles.

WE KEEP IN STOCK ALL KINDS OF

Saw Mill Furnishings

SAW GUMMERS:—Stone's Original, large and small size; Mixter's Self-feeding Champion; Emery Wheels and Stands.

SAW SWAGES:—Hoe's, Emerson's, Mixter's, and American Saw Co.; from $1.50 to $6.00.

SIDE FILES, BELT STUDS, Detachable Belt Fastners.

JARECKI'S PATENT SCREW, PLATE, and PIPE CUTTER, ½ inch to 2 inches, $28.00; smaller ranges in proportion

Band Saws, Scroll Saws, Rainbow Saws for felling trees, American Shingle Saws, Lace Cutters. Cant Hooks. Flue Scrapers, Leather, Cotton and Rubber Belting.

SPECIAL AGENTS FOR GANDY'S PATENT MILL BELT, runs wet or dry; the best and cheapest main driver

WORTHINGTON and BLAKE'S PATENT STEAM PUMPS. ECONOMIST PLANER and MATCHER COMBINED, large range of work, light, handy, durable, cheap.

Ewart's Detachable Chain For Log Jacks, Refuse Carriers, Sawdust Carriers, all sizes, Live Rolls, Tranfers, Slow Speed Driving Belts, Tie Loaders, Slash Tables, Trimmers, Lumber Sorters, Shingle Block Elevators, and many uses about a saw mill.

HIGH CLASS HEAVY and PORTABLE SAW MILL MACHINERY our Specialty.

Waterous Engine Works Co., Brantford

Send for New Price List and Chain Circular. ☞Mention this Paper.



PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM

VOL. 4. PETERBOROUGH, ONT., FEBRUARY 1, 1884. NO. 3.

More lumber will be cut in Maine this winter than has been expected, owing to efforts to secure as much as possible of the large amount of timber that was blown down by recent heavy storms.

At Duluth, 406 buildings were erected during the past year, at a cost of $1,527,121. The lumber output increased to the amount of 31,535,322 feet, and grain receipts increased nearly one half.

One of the largest cargoes of Southern pine ever brought into the port of New York came to Robinson & Booth, per schooner Nathan Esterbrook, Jr., from Pensacola, Fla., consisting of 580,000 feet.

A party of loggers have gone into the woods on the head waters of the Yakama, W. T., under the direction of James Robinson, for the purpose of getting out ties and other timber for the Northern Pacific railroad.

The Connecticut River Lumber Company, of Hartford, is intending to put into Connecticut river this season 20,000,000 feet of spruce logs; Geo. Van Dyke, of McIndoes Falls, Vt., will put in about 12,000,000 feet, and Capt. A. M. Beattie, of Lancaster, N. H., 5,000,000. A large number of smaller operators will swell the grand total to 50,000,000 feet to be cut from the forests of Northern Vermont and New Hampshire, to be run down the Connecticut.

The *Northwestern Lumberman* says:—Mr. S. H. Webster, for many years an extensive lumber manufacturer in the Saginaw valley, who a few years ago effected a settlement with his creditors at 50 cents on the dollar, came to the front on New Year's day and presented every one of them with a check for the other half of the dollar. Always a genial generous gentleman as well as an enterprising business man, this last act of Sam Webster, as he is familiarly known, ought to make his name immortal. In this day and age such a deed is as rare as it is gratifying.

The *Timber Trades Journal* says:—According to the United States papers pitch, or, as they term it yellow, pine, is to be the wood of the future, and men have been buying up timber lands expecting to realize an advance within a reasonable period; but we expect the time will be a long while coming when the demand for pitch pine supersedes that for wood from the Baltic ports. It is idle to talk about the exhaustion of the forests of northern parts of America as clearing the way for a more active consumption in timber from the south, for we have still got to deal with all the Russian forests besides those of Finland, Gulf of Bothnia, and Germany, besides Poland.

FOREST DESTRUCTION.

The following is taken from Mr. Sinclair Tousey's travels in Southern Europe:—

Much of France, nearly all of Spain, and large portions of Italy are entirely destitute of forests. The tourist can travel day after day in these countries without seeing standing timber enough to make a descent sized barn. The people in these sections are bothered to get the very little fuel they need, depending upon the trimmings of shade and fruit trees and vines for what they get; while the damage done to the country by heavy rains is beyoud estimate, especially in the hilly regions, where the rain, falling on the ground, finding no trees with their wide-spreading roots to check its passage off the surface, rushes with tremendous force into the valleys carring all before it.

So destructive are these torrents, and so suddenly do they come down the river bed, that in many places heavy stone walls are erected to keep the sweeping floods within bounds. Within a few hours after one of these torrents have swept down a valley, the bed of the river will be as dry as if water had never wet it. Another evil is the scarcity of small running streams for the use of cattle and for manufacturing purposes.

The unchecked rain, finding nothing in its way, hastily passes from the surface and gets into the sea; whereas, if the land was sprinkled with forests, much of it would be absorbed by the ground, and by gradual percolation find its way to the streams and keep them alive to aid the work of man and give drink to animals.

I earnestly implore the owners of forests in our favored land to be careful of the trees and waste none. We can leave our successors no better legacy.

PROTECTING THE ADIRONDACKS.

The movement in favor of the protection of the Adirondack forests in the State of New York seems to be progressing rigorously. Mr. J. C. Parsons writes to the Brooklyn *Eagle* entering very fully into the advantages of perpetuating these forests as regards climate, the insurance of a water supply for the Erie canal, and the value of the revenue to be derived from the timber, &c. As to the question of purchasing lands in addition to those held by the State he says:—

"But why should the lands not be made in time to repay the cost of purchase. Setting aside other considerations, in respect to the general welfare of the State? If immense fortunes have been made in the lumber business why cannot the State, by establishing the same system in connection with the forests as in Europe and Canada, derive an annual revenue from the judicious thinning out of the timber.'

We fully agree with the writer as to the propriety and the economy of the course he suggests, and willingly accept his testimony in favor of such a system. We must, however, express our regret that the situation is not so favorable in Canada as he imagines. In Europe the Government forests are perpetual and yield a constant annual revenue without impairing the national property. In Canada though there are annual receipts from the Crown forests they are not in the nature of a yearly income from capital, but are obtained by the suicidal policy of "killing the goose that lays the golden eggs." Our forests are being destroyed, not cropped as in the European system.

SUPPLIES FROM GREAT BRITAIN.

The *Timber Trades Journal* says:—It must be kept in mind that the vast consumption of timber going on in America does not effect the European export market very much, because there is sufficient competition among the various timber shipping countries on this side of the Atlantic, to keep prices moderately low, even if the supply frem North America to the United Kingdom were cut off altogether; and it is significant that among the causes periodically assigned for inducing us to believe in a shorter supply the succeeding season, no attempt is now made to persuade us that the Scandinavian forests are graduating towards early extinction, when no further use can be made of natural causes—the absence of frost and snow, the want of water in the rivers, or too much of it &c.—then societies, clubs, and conventions are either formed or forming, we are told, to prevent so much wood from being cut down, and to limit the supply to the requirements of the trade, with a fair profit to everybody. But somehow or other it always happens that, however large has been the export from the producing countries, there is a good deal more left in the hands of the shippers than it is agreeable for them to hold over when the season closes.

The letters of our Swedish and Norwegian correspondents, which we published last week, are both pretty much to the same effect. The one alluding to the mild season that had prevailed in Sweden up to that date (15th Dec.) adds: "There will consequently be no production of logs to speak of in the principal export districts till the second week in January." This may be remedied; but he says that it is intended to curtail the supply "unless a rise of price takes place before the end of February;" but in any case he thinks "it would be suicidal to make as many logs as of late years." Our Norway authority also is of the same opinion, stating "that it is pretty certain the number of logs will not be large, the cutting having begun so late."

But what we have to look at is the state of the supply on this side, and the general desire which is always apparent in the timber countries to get their produce turned into British money with the least possible delay, in obedience to a natural law which governs all trade—just as we see in our own ironworks, where the manufacturers are quite as anxious to do business now that the price is about £6 per ton as they were when the same description was £10 and £12 per ton. And as there is something more than an average winter stock of wood goods in hand on our side, it is not likely that larger prices will find favor here for some time to come with those who are not likely to require their customary supplies very hastily from abroad.

THE CANADIAN POPLAR (POPULUS CANADENSIS.)

I have long thought that this tree deserved to be more extensively planted than it is, especially in situations for which it is more especially adapted, viz., moist water margins and similar places. Even when planted in elevated or dry situations it over-tops everything else. I have in my "mind's eye" a belt of mixed trees that were planted about forty years ago, and the Canadian Poplar, as it is locally called, is nearly double the height of the other trees, of which a goodly proportion are spruce firs; the poplar far outstrips them all, both in height and cubic contents of timber. It is, however, as I have said, in damp ground that its rapidity of growth and inclination to produce timber is more especially remarkable. The timber, likewise, is not without value; but I do not fully endorse an old distich which speaks of it as outlasting that of the oak under certain circumstances. There are, however, purposes for which it is very suitable, being almost incombustible. In Kent there has been of late years a great demand for it for the joists of hop-kilns, which, being exposed to the action of a hot charcoal or coke fire burning openly a few feet below, are necessarily much exposed to the risk of being burned down. Poplar joists are, therefore, much sought after. Boards of poplar, as well as those of willow, are also useful for insides of stone wagons or carts, where a harder wood is not so good, being liable to splinter during rough usage. There are other purposes to which poplar wood may be turned to good account, but it is unnecessary to mention them here; suffice it to say that the rapidity of its growth is a sufficient reason for recommending it to be planted extensively by all who wish for immediate effect.—*A. R. G., in "Woods and Forests."*

A Large Contract.

Mr. Oscar A. Droege has just entered into a contract with the Mexican Government to plant 2,000,000 trees in the Valley of Mexico within four years. The contractor pledges himself to plant 80,000 ash, 35,000 willows, 120,000 poplars, 60,000 eucalyptus trees, 60,000 acacias, and 120,000 of miscellaneous varieties. The trees must be in plantations of from 50,000 to 100,000 each.

AUSTRALIA.

We take the following from the monthly circular of Messrs. Lord & Hughes, timber brokers, of Melbourne, dated the 21st of Nov. 1883:

Since our last report, on 21st ultimo, the offerings at auction of most descriptions of timber have been large, and we have to report a general decline in price, except for American lumber, which has shown an advance.

The cargo of spruce ex Hooghly, from Quebec, via , Adelaide, and the balance of Oregon, ex Chrysolite, were offered at auction yesterday, but bidding not being up to importers' views, they were withdrawn.

The trade are doing a large business, which seems likely to continue.

The arrivals have been—Marie Becker, from Gothenberg, and Bertha, from Frederickstad, with flooring; Felix, from Gefle, and Leto, from Soderham, with deals; Hooghly, from St. John's, Memon, from Saguenay, and Augusta, from Chicontimi, with spruce deals, flooring, and pickets; Star of Peace, from Port Gamble, with Oregon timber, laths and pickets; Rodney, MacCullum More, Androsa, Sussex, and Loch Shiel, from Great Britain, with flooring, deals, slates, lead galvanized iron and cement; Etna and Hanover, from Hamburgh and Antwerp, *via* London, with galvanized iron and cement; Eme and Navesink, from Boston, with clear pine, shelving, ceiling, spruce deals, slates, laths, and plaster; Stanley, from Kaipara, with Kauri pine; Nemesis, Wendouree, Leura, Rodondo, Konoowarra, and Cheviot, from Sydney, with cedar and laths; Victorian and [illegible] Australian, from Adelaide, with laths and plaster.

RED DEALS.—Imports: 613 standard, from the Baltic. The arrivals have been Felix, from Gefle, and Leto, from Soderham. Sales by auction during the month have been light. On the 30th October the cargo ex Mississippi was offered, when only 300 pieces 9x3, brand HBA, were sold at 5d. per foot of 9x3. Other sales have been of parcels ex Charlotte Lange and Wilhelmina.

SPRUCE DEALS.—Imports: 59,576 pieces. The arrivals have been Hooghly, Memnon, and Augusta from Canada, Eme and Navesink from Boston, and Adrosa from Liverpool. Sales by auction comprise cargo ex Memnon and shipments ex Navesink and John Lewis, the latter being a transhipment from Adeliade; 11x3 realized 3⅜d. to 3d., and 9x3 3⅜d. to 3⅜d. The cargo ex Hooghly was offered yesterday, but 3 3-16d. being the best offer it was withdrawn for the prcsent.

OREGON TIMBER.—Imports: 637,114 feet super. This parcel arrived in the Star of Peace from Fort Gamble, and was offered at auction on the 13th inst., but only a small portion was sold at £6 12s. 6d. for deal sizes, and £6 15s. for flitches. The cargo, ex Nanaimo, was sold on 2nd inst., at £7 2s. 6d. to £6 10s. The balance of cargo, ex Chrysolite, was offered at auction yesterday, but £6 7s. 6d. being best offer, it was withdrawn.

LUMBER.—Imports: Clear pine, 260,888 feet super; white pine shelving, 96,190 feet super; T. and G. ceiling, 15,687 feet super. The arrivals have been Eme and Navesink, from Boston. The cargo, ex Navesink, was offered at auction on 16th inst., when all the shelving was sold at an advance on last quotations, Peabody brand realizing £14 to £13 12s. 6d. revere, £13 12s. 6d. to £12 12s. 6d. T. and G. ceiling, £10 2s. 6d. Michigan clear pine realized £18, and Canada clear, £17 10s.

PITCH PINE.—Imports: *Nil.* Auction sales.—*Nil.*

REDWOOD.—Imports: *Nil.* Sales by auctlon have been made of 1 in. 2 in. 3 in. and 6 in. at £11 10s.

FLOORING AND WEATHERBORDS.—Imports: 2,756,400 feet lineal from the United Kingdom aud Norway; 1,028,930 feet lineal from Canada. The arrivals have been Marie Becker and Bertha, from the Baltic; Memnon and Augusta, from Canada; Rodney and Loch Shiel, from Great Britain. Sales by auction during the month have been made—ex Charlotte Lange, Ivanhoe, Wilhelmina, Schwanden. The following being prices realized: Red 6x1½, 10s. 6d. to 9s. 6d.; 6x⅞, 8s. to 7s. 9d.; 6x¾, 6s. to 5s. 9d.; 6x⅝, 5s. 6d. to 5s. 3d.; 6x½, 4s. 9d. to 4s. 6d.; 4-out weatherboards, 6s. 9d. to 6s. 6d. White 6x1⅛, 9s. to 8s. 3d.; 6x⅞, 7s. 6d. to 7s. 3d.; 6x¾, 6s. to 5s. 3d.; 6x⅝, 4s. 9d.; 6x½, 4s. 8d. to 4s. 4d.; 4-out weatherboards, 6s. to 6s. 3d.

KAURI PINE.—Imports: 283,127 feet super. The only arrival since our last has been Stanley, from Kaipara, cargo of which was sold by auction on 13th inst. Sales have also been made Marie Virginia and Robin Hood, of logs, at 12s. to 10s. 6d.; flitches, 17s. 9d. to 12s.

CEDAR.—Imports: 269,140 feet super. The arrivals have been Nemesis, Wendouree, Leura, Rodondo Konoowarra, and Cheviot, steamers, from Sydney. The only sales by auction of logs took place yesterday, when about 94 were sold at 51s. to 33s.

RED AND WHITE PINE (Colonial.)—Imports: *Nil.* Auction sales.—*Nil.*

DOORS.—Imports: *Nil.* On 16th inst., sales by anction of American doors, ex various ships, were made: 2 ft 6 in. x 6 ft. 6 in., 1¼ in. d. m., No. 1 realizing 9s. 9d, each in bond; do., 1¼ in. do., 12s. 3d. do; 2 ft. 8 in. x 6 ft. 8 in., 1½ in. do., 14s., do.; do., 1¾ in do., at 16s. 3d. do.; 2 ft. 10 in. x 6 ft. 10 in., 1¾ in. do., at 18s. do.; 3 ft. x 7 ft. 1¾ in. do., at 20s. 3d. to 20s. do.; do., 2 in. do., at 21s. do.

LATH AND PICKETS.—Imports: Laths, 4,578 bundles: pickets, 3,953 bundles. Sales by auction have been made of Oregon laths, 4½ feet, at 42s. to 41s.; 4-feet, 33s. Oregon pickets, 6-feet, £9 7s. 6d.; 5-feet, £10 5; 1½-feet, £9 15s. to £9 7s. 6d.: spruce laths 4½-feet, 41s. to 40s. Spruce pickets, 4½-feet £7 10s. to £7 7s. 6d. Baltic white laths, 4½-feet, 32s. 6d.; 4-feet, 26s. 6d.

DESTRUCTION OF FORESTS.

Sveral years ago there was great lementation over the destruction of the buffalo, until some political economist suggested that an ox required no more food than a buffalo, and that the country would be richer by hundreds of millions of dollars if the buffalo could be exterminated and their places occupied by good breeds of cattle. We remarked to a friend, recently, that the supply of good pine lumber was nearly exhausted in this country. He said he was glad to hear that was the case, for as long as the pine lumber lasted it would exclude from the market various materials that have been experimented with sufficiently to prove that they are in all respects equal to, and on many accounts superior to lumber.

It seems more than probable that ten years after the pine lumber shall have disappeared there will be but few regrets tor its loss; and that in the next century a new growth will have taken the place of the old, undisturbed by the axe of the pioneer. The history of the lumber trade may come to resemble in that respect the history of the whale oil trade. Petroleum destroyed that business, as straw-lumber, paper mache and similar manufactures are likely to destroy the lumber trade.

There can be no doubt but that the wholesale destruction of the forests in this country is doing great injury to its agricultural interests, and that it should be stopped, and particularly in the older States, where hardly any tree are left to make new forests, and where the soil is so thin that the land becomes a desert when unprotected by tree. But in unsettled portions of the country to which immigration is not attacted it is probable that the evil work out its own cure through natnral causes.

Not Content With Being the Best.

Whatever may be said in regard to the propensity of the management of great railway lines to provide for the public only what is actually demanded in the way of accommodations and comfort, can in no way apply to the management of the Chicago, Rock Island & Pacific Railway, or as it is more familiarly known, "The Great Rock Island Route." This line has for years been recognized as the best and most comfortable route between Chicago and Kansas City, and the Southwest, and has been abundantly able on this account to successfully cope with its competitors. But not satisfied with this success and already elegant equipment, its managers have caused to be turned out of its shops at Chicago, a magnificent line of Dining Cars, which go into immediate service on the Kansas City Line. These cars contain all the conveniences of well-furnished dining rooms, are elegant in design and finish, and models of the advanced railway art of the day. Within them meals are furnished equal to those of any first-class hotel in the land at the low rate of seventy-five cents. Travellers on this line now find on its trains all the comforts and conveniences of first-class hotels. Besides the best of first and second class coaches there are Parlor Chair Cars (which are free to all passengers holding through first-class tickets), Pullman Palace Sleeping Cars and Dining Cars.

This Company's lines, all of which are equally well equipped—also extend to Council Bluffs and the West, and Minneapolis and St. Paul and the Northwest; and the deserved praises bestowed upon it by returned travellers who speak from experience, make it noted throughout the land.

We bespeak for the owners and managers of this magnificent Railway ample returns for their generous provisions for the wants of the public, which is, as has already been proven by the patronage extended to this l ine, quick to appreciate and patronize those who prove by their deeds and generous treatment that they are devoted to its comfort and welfare.

"The Journal of Progress."

We have watched with much interest the incept on of a new monthly magazine entitled *Journal of Progress: The Woodworker's Magazine.* It is one of the most tastefully printed periodicals that we know of, embellished as it is with a coloured cover, appropriate title headpiece, initial letters, handsome engravings, etc., etc., and printed in good type on excellent paper. The number before us contains two large, full page engravings, designed especially for this magazine, which for elaboration, finish and general excellence will be much admired. The *Journal of Progress*, although ostensibly a woodworker's magazine, contains a great variety of matter—much of it from eminent authors—suited to readers of almost any description. Its columns headed Chips, Curious, Historical and Scientific, Literature, and Important General News, and its series of papers on "What Shall We Do With Our Boys?" by some of the most prominent writers of the day will be looked for ward to much with anticipations of pleasure. It is published by the *Journal of Progress Company*, 907 Arch street, Philadelphia.

Killed in the Woods.

On Friday afternoon, Jan. 11th, two young men in the employ of Mr, Little, lumberman on the St. Maurice, were felling a tree in the woods. A large branch, falling, struck one of the young men and killed him instantly. The decased, Edward Young, belonged to Three Rivers.

IF you are troubled with a "hacking cough," Down's Elixir will give you relief at once. Warranted as recommended, or money refunded. Price 25c, 50c, and $1.00 per bottle.

HELP REQUIRED.—Dyspepsia does not get along without assistance. It requires careful diet and thorough treatment. Burdock Blood Bitters have effected the most remarkable cure on record of chronic Dyspepsia.

WHAT THE FIGURES REVEAL.—G. M. Everest, of Forest, says that in one year one family purchased over fifty bottles of Hagyard's Pectoral Balsam for their own use and that of various friends. He has sold this invaluable throat and lung remedy over sixteen years, and its sales are speadily increasing.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainity, write for particulars to H. HALLETT & Co., Portland, Maine. 6md145-1yw51



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Collier Street, Adjoining the Market.
RATES REASONABLE, CENTRAL LOCATION, FREE BUS TO AND FROM ALL TRAINS.
☞ Every accommodation for Commercial and LUMBERMEN.
1Ltf W. D. McDONALD, Proprietor.

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LUMBER MERCHANTS
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Wholesale and Retail Dealer in
Pine and Hardwood Lumber, Lath, Shingles Veneers, Wave Mouldings & Fancy Woods.
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STEWART & FLECK, Jr.,
Manufacturers of every Description of
Saw and Grist Mill Machinery,
Water Wheels, Steam Engines, Derricks, Boilers, Steam Pumps, Mining Machinery
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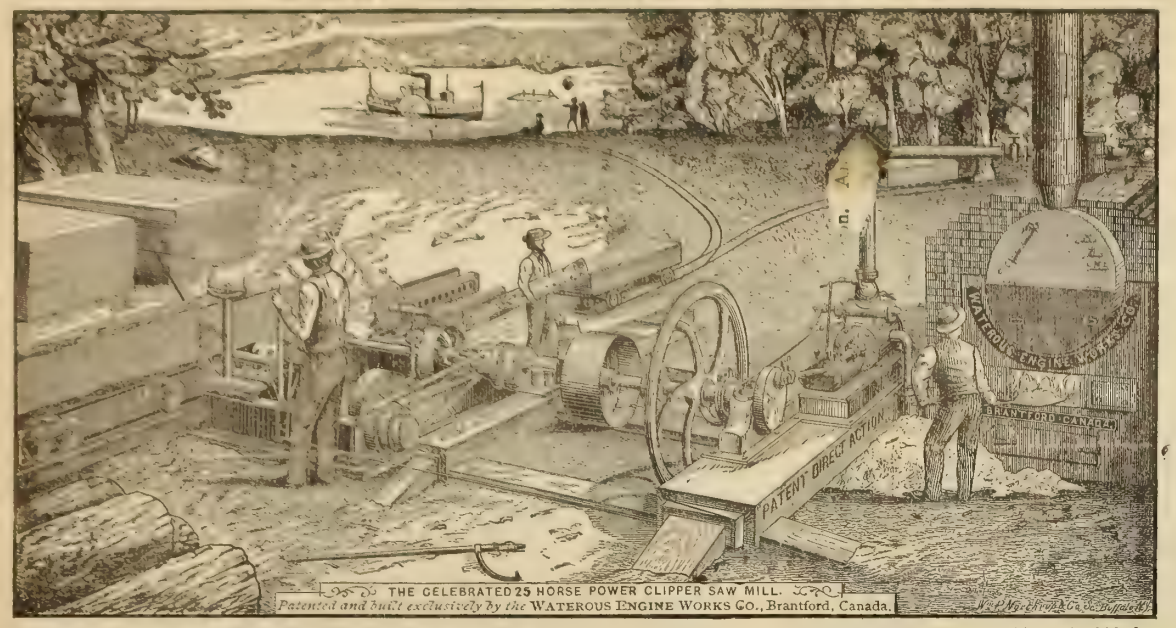
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WHOLESALE AND RETAIL
LUMBER MERCHANTS
And MANUFACTURERS,
☞ Dealers in WALNUT, BUTTERNUT, CHERRY, CHESTNUT, ASH, OAK, WHITEWOOD, and all kinds of Hardwood and Pine Lumber. PICTURE BACKING, HOLLY, EBONY, LIGNUM-VITÆ, RED CEDAR, &c. American and French VENEERS.
Orders for Lumber and all kinds of Factory Work promptly attended to. Lumber Kiln dried to order.
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EPPS'S COCOA
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"By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well-selected Cocoa, Mr. Epps has provided our breakfast tables with a delicately flavored beverage which may save us many heavy doctor's bills. It is by the judicious use of such articles of dict that a constitution may be gradually built up until strong enough to resist every tendency to disease. Hundreds of subtle maladies are floating around us ready to attack wherever there is a weak point. We may escape many a fatal shaft by keeping ourselves well fortified with pure blood and a properly nourished frame."—*Civil Service Gazette.*
Made simply with boiling water or milk. Sold in tins only (¼-lb. and lb.) by Grocers, labelled thus:
JAMES EPPS & Co., Homœopathic Chemists,
1yL21 London, England.


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English Extract of
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One of the Best
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INVESTIGATORS IN USE.
It is a specific in the cure of all diseases of the Kidneys, Bladder, Prostatic Portion of the Urinary Organs, Irritation of the Neck of the Bladder, Burning Urine, Glee, Gonorrhea in all its stages, Mucous Discharges, Congestion of the Kidneys, Brick-dust Deposit, Diabetes, Inflammation of the Kidneys and Bladder, Dropsy of the Kidneys, Acid Urine, Bloody Urine, Pain in the Region of the Bladder, PAIN IN THE BACK, Urinary Calculus, Renal Calculus, Renal Colic, Retention of Urine, Frequent Urination, Gravel in all its forms, Inability to retain the Water, particularly in persons advanced in life. IT IS A KIDNEY INVESTIGATOR that restores the Urine to its natural color, removes the acid and burning, and the effect of the excessive use of intoxicating drink.
PRICE, $1; or, Six Bottles for $5.
☞ Send for Circular. Sold by all Druggists.
W. JOHNSTON & CO.,
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Semi-Portable and Portable Direct Action and Belted Saw Mills!

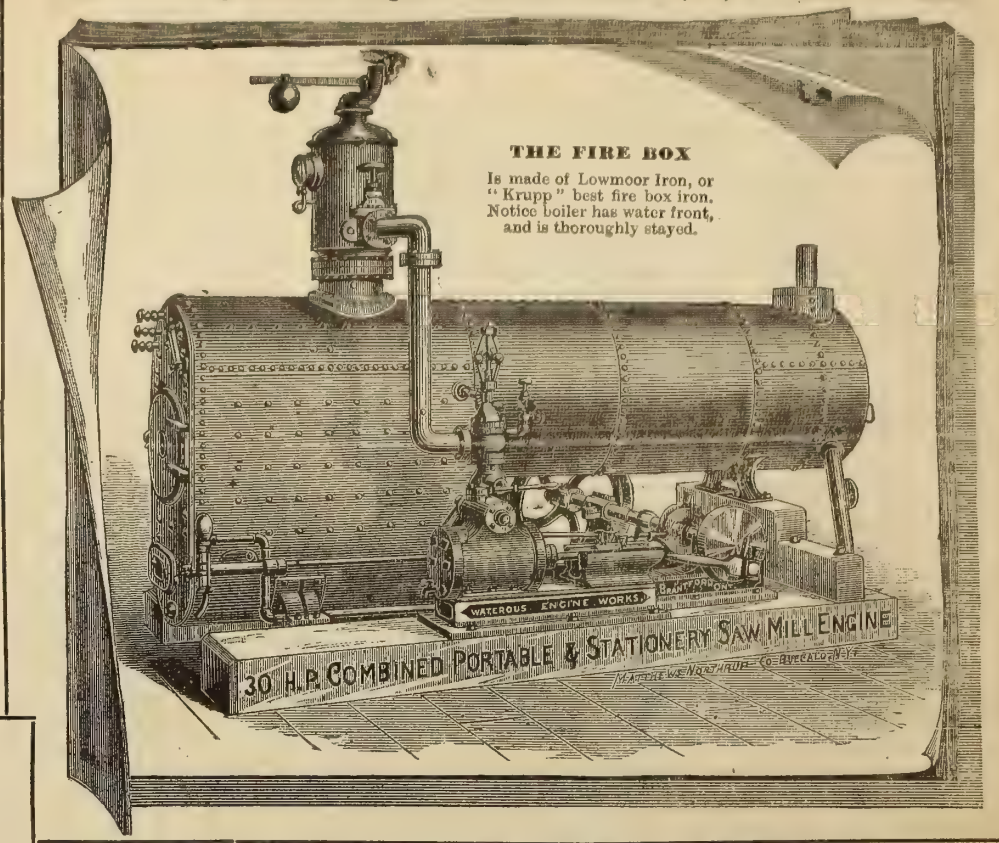
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THE CELEBRATED 25 HORSE POWER CLIPPER SAW MILL.
Patented and built exclusively by the WATEROUS ENGINE WORKS CO., Brantford, Canada.

Above cut rep esents **Our 25 H. P. Patent Direct Action Mill** which we guarantee to cut 8,000 to 12,000 feet of lumber per day of ten hours, and to be the most efficient, economical and durable mill built in America, and will saw lumber cheaper per thousand than heavy large size belted or gang mills. For over a quarter of a century the leading pioneer mill of Canadian settlers. ☞Specially constructed for hard work.

☞This Cut represents the Engine furnished with Nos. 8, 12, 16 and 18 Saw Mills.

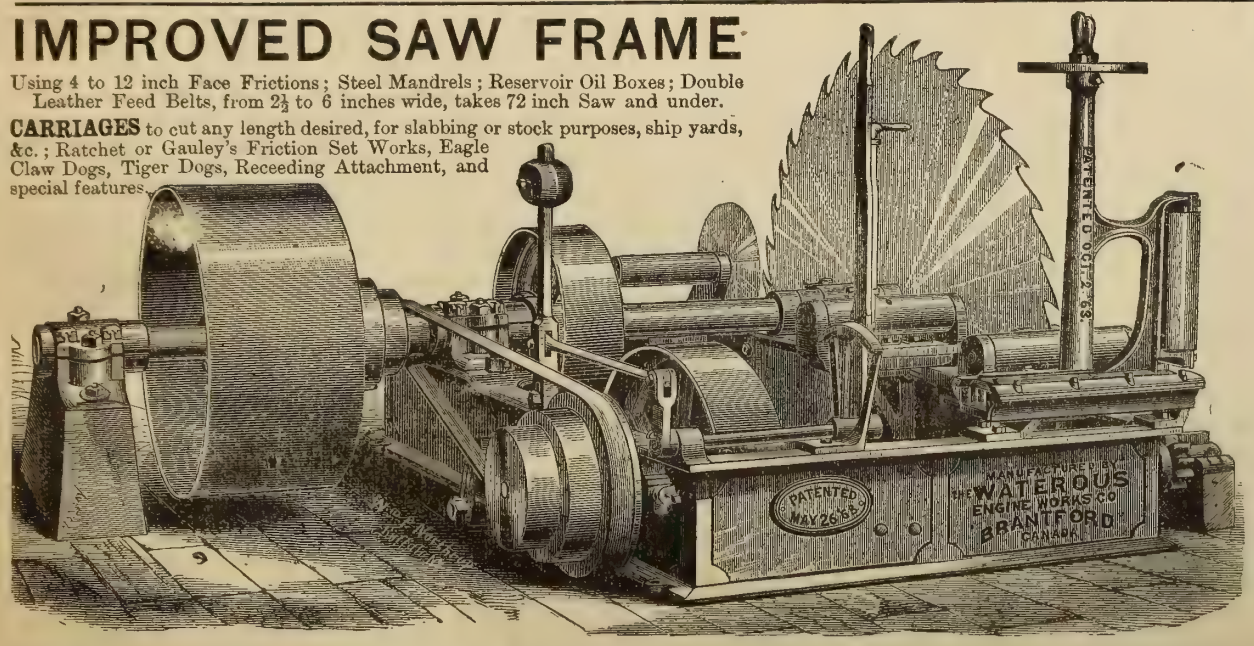


A. & P. White, Pembroke, have one of these 30 H. P. mills at Deux Rivieres, C. P. R. R.
G. C. V. Hall, Quebec, has one of these 30 H. P. mills at St. Agnes, Quebec.
Also, W. & R. Wallace, Gardner's Creek, N.B., with 60 foot Ship Yard Carriage.

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Using 4 to 12 inch Face Frictions; Steel Mandrels; Reservoir Oil Boxes; Double Leather Feed Belts, from 2½ to 6 inches wide, takes 72 inch Saw and under.

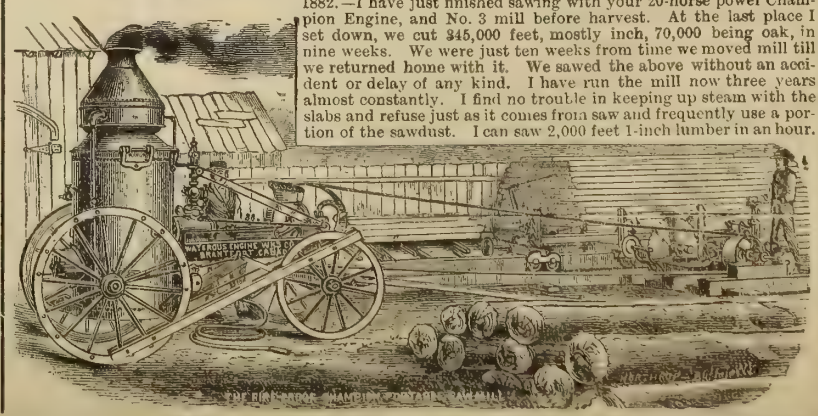
CARRIAGES to cut any length desired, for slabbing or stock purposes, ship yards, &c.; Ratchet or Gauley's Friction Set Works, Eagle Claw Dogs, Tiger Dogs, Receeding Attachment, and special features.



Champion Portable Saw Mills

12, 16, and 20 H. P.

GEORGE BOOK writes as follows:—"ST. ANNS, ONT., July 27th, 1882.—I have just finished sawing with your 20-horse power Champion Engine, and No. 3 mill before harvest. At the last place I set down, we cut 345,000 feet, mostly inch, 70,000 being oak, in nine weeks. We were just ten weeks from time we moved mill till we returned home with it. We sawed the above without an accident or delay of any kind. I have run the mill now three years almost constantly. I find no trouble in keeping up steam with the slabs and refuse just as it comes from saw and frequently use a portion of the sawdust. I can saw 2,000 feet 1-inch lumber in an hour.



The following are a few who have bought these mills:—

Canada Pacific R. R. Co.
G. B. Hall & Co., Que. (2)
Dominion Land & C. Co. Sherbrooke, Que. (2)
Sorel R. R. Co., Que. (2)
Cochrane Ranche Co. Bow River, N.W.T.
Nor.-West Milling and Mining Co., Bow River, N.W.T.
Toronto and Nor.-West Colonization Co., Near Brandon.
Morton Dairy & Farming Co., Turtle Mountain.
Allan Grant, Ottawa.
Geo. Perley, Ottawa.
Michipicoten Native Copper Co.,
W. W. Stewart, Montreal

☞. Double Edgers, 2, 3 and 4 saws; Automatic Lumber Trimmers, 5 to 9 saws each; Log Turners, Slash Tables, Log Jacks or Haul-up of all Capacities, Endless and Single Chain; Automatic Log Rollers, Transfers, Live Rolls, Shingle Machines, Drag Saws, Knee Bolters or Block Splitters, Shingle Packers, Gang Lath Mills, Stave Machines, Automatic Sawdust Feeders for Gangs of Boilers, Sawdust, Slab and Refuse Conveyors, Elevators, Pickering Governors, Worthington and Blake Steam Pumps, American Planing and Matching Machines, American Saws, Solid and Inserted Tooth, Extra Thin Circular Board Saws a specialty, Swages, Gummers, Emery Wheels, and all kinds of Saw Mill Furnishings kept in stock.

☞ WATEROUS ENGINE WORKS CO., Brantford, Canada.

Send for New Price List and Illustrated Circular, of special interest to saw-mill men. ☞Mention this Paper.

MAGNITUDE OF OUR LUMBER MANUFACTURE.

The Saginaw River is the largest lumber producing point in the world. Since 1879 the cut each season has ranged from 730,000,000 to over 1,000,000,000 feet in round numbers. The season of 1883 was in many respects unfavorable for active operations of the mills. The mills got a late start and early in the season many heavy rains set in and continued until the first of July, causing high water, which in some instances forced the mills to suspend for weeks. The streams were flooded and log rafting checked, consequently many of the mills were delayed for want of logs and to crown the misfortune the Tittabawassee boom men struck, and log rafting was entirely suspended for a period of two weeks. There was also more or less delay for logs during the balance of the season. Under these circumstances the record of the mills, cutting an aggregate of 938,675,078 feet of lumber, is an extraordinary one, when it is considered that 1882 was the banner year, no untoward circumstances occurring to cause delay during the entire seson, and yet the production of 1883 only falls short of that of 1882 in round numbers about 73,000,000 feet.

NORTHERN AND NORTHWESTERN RAILWAY.

To the Editor of the Canada Lumberman.

SIR,—In your issue of Dec. 15th your Toronto correspondent gives some figures to prove that this Company exacts a higher rate of freight on lumber from common points to Toronto than the Midland, and also states that the Midland Company has cancelled all shunting charges to sidings west of Bathurst street, and to Parkdale, and that the N. & N. W. Railway is the only line that insists on collecting these charges.

In the first place your correspondent makes the error of adding shunting charges to our rates, and deducting terminal charges from the Midland's, before making comparison.

His selection of shipping points is not fair, as in citing Midland (a Georgian Bay point) he should have shown in comparison our Penetang and Collingwood rates, which are exactly the same, and also Georgian Bay points; and as regards the statement that we add $2.00 per car on lumber destined for Parkdale, such a statement could only be made on utterly incorrect information. The facts are: Parkdale being a regular billing station on the N. & N. W. Railway all lumber consigned direct to that station is, of course, delivered without any shunting charges, for at no time has shunting been charged on direct consignments. But when lumber is consigned to Toronto, and we are asked to haul it back to Parkdale, surely we are justified in making a charge for so expensive a service.

Then as to the assertion that the Midland makes no charge for shunting to west end sidings, I have Mr. A. White's statement in writing before me that the Midland Railway collects shunting charges, in addition to freight, on all lumber consigned to Toronto and ordered to Parkdale, and west end sidings.

Mr. John Earls, of the Grand Trunk, also assures me that his company collects shunting for this service.

Now, as your correspondent has such accurate information, he should be able to prove that Messrs. White and Earls are wrong in saying their companies do make these charges, otherwise, he should withdraw his statement against this company.

Herein I give you figures showing comparison of rates on Midland and Northern, viz.:

	When consigned direct to Parkdale.	*When consigned to Toronto yard and ordered to Parkdale.*	*When consigned to Toronto yard and ordered to any siding between Bathurst and King Streets.*
Midland	$ 20 40	$ 22 40	$ 21 40
Waubaushene	20 40	22 40	21 40
Penetang	20 40	22 40	21 40
Collingwood	20 40	22 40	21 40
Gravenhurst	21 60	23 60	22 60

Press of business and absence from the city has prevented me from replying to these strictures of your correspondent before.

By-the-by, why does he exercise such extreme care to cover up his identity? Why not appear openly and discuss this subject frankly with us? By so doing he will hear both sides of the question, and can then deal with the subject more intelligently and with some degree of correctness.

Yours truly,
ROBT. KERR,

General Freight and Passenger Agent's office Northern and Northwestern Railway, Toronto, Jan. 12, 1884.

To the Editor of the Canada Lumberman.

SIR,—Referring to Mr. R. Kerr's letter dated Jan 12th,—In justice to the Northern & Northwestern railway will you kindly permit me to state that the shunting charges of this division, and also rates from competitive points are precisely similar to those of the Northern and Northwestern.

Through a misunderstanding upon the part of our late agent at Toronto some shunting charges in that city were not collected, but accounts are now being rendered and will no doubt be duly paid

We look upon our lumber merchants' interests as being identical with our own, and try to arrange our affairs accordingly, but never through petty cuts in rates, which our best customers would be the first to condemn.

Yours respectfully,
A. WHITE,

District Traffic Manager, Midland Division, Grand Trunk Railway, Peterborough, Jan. 19th, 1884.

WOODS IN THEIR EARLIER STAGES.

When the late distinguished chemist Liebig first turned his reaseaches to the benefit of agriculture, he caused some manures to be manufactured which, on his recommendation were widely applied and tested. He had determined by analysis exactly what the crops required for their nutrition, and he had supplied by means of chemical compounds those substances in which certain soils were defective. Confidently awaiting great results, he was much disappointed when farmers convinced him that there was no commensurate improvement. He was not a little puzzled by this unaccountable failure of theoretical science; but all at once it dawned upon him that he had neglected the most obvious and essential precaution. He had neglected to render his compond soluble in water. Seeing that all vegetables—agricultural crops as well as trees—imbibe their nourishment from the ground dissolved in water, this fatal error had rendered the manures inoperative. When, however, the same ingredients were combined in a form soluble in water and applied to the soil, and the results were most satisfactory. A similar error may be committed by the forester if he allow his wood to become so open and defective in shade, that the moisture accumulated during the winter may be dried up early in the summer or before the end of the season of active vegetation. It is apparent how important a part moisture or water plays in vegetation. Trees will thrive almost equally well on soils of the most different geological formations, if only the condition be fulfilled that there is a sufficiency of moisture. For most trees, it matters very little what rock it is which has crumbled to form the upper soil so long as the soil is moist enough and of sufficient depth to retain moisture. The moisture showered on the forest soil during the winter months requires to be stored up and economized so as to last over the summer period of active vegetation, and to this end it is necessary to keep the ground densely shaded from the sun's rays. The close order of trees producing the requisite shade also enriches the ground with more fallen leaves, giving forth in their decay an increased quantity of carbonic acid—a powerful solvent of the soil minerals. Shade arising from close order will be accompanied by a greater measure of stillness and the useful gas will not be wafted away by the wind, but remain in the covert forming watery food for the roots.

It is not altogether uncommon to see young woods in which many of the trees are crooked or forked and of a branching habit, the ground underneath them being covered with a profuse vegetation of annual weeds and grasses intermingled with such other weeds as cranberry, whortleberry, broom brambles, or heather. These symptoms are indications that the woods have been originated from plants two wide apart or two severely thinned, or that both these errors have been committed in their treatment. Instances may sometimes be encountered in which it is attempted to correct the multiplicity of side branches by a wholesale system of pruning. The strong development of side branches being a sign that too much light is penetrating the covert, and that the upper canopy of foliage is not dense enough, pruning will in these respects make matters worse and favor the growth of the weeds. In forestry on an extensive scale, where timber-raising is chiefly a financial undertaking, the pruning of young trees in the forest will be quite an exceptional operation. It may be all very well in a park wooded for ornament and game preserving, but in a forest the area of young trees will be so considerable, and counting several thousands of young trees per acre, that the attempt to traverse it with pruning operations will generally be hopeless. Where the attempt is made, the growing sense of the magnitude of the task is apt to induce haste and carelessness in the execution. But all the toil and expense of pruning woods during the earlier stages of their growth may be very simply and effectually avoided by crowding the young trees more closely together.

As already indicated, the branching habit which pruning strives to correct as well as the tardy growth which may accompany it, arises from the too wide difference between the young trees. To the introduction of a wide and open fashion of covert several causes may have contributed in this country. In the first place the revival of forestry in Britain may be considered to date from the extensive formation of Larch plantations by the late Duke of Athol. Now the larch is quite an exceptional tree, and more necessitous of light and air than any other. It is by no means improbable that that the methods and rules conducing to the successful cultivation of the larch would at first be apt to obtain a general application. These being transferred to other trees would tend to perpetuate a pattern of wide separation in planting. Wide planting may have been encouraged also by the desire of saving the expensive labor of early thinnings, and by apprehension of the bugbear of weakly drawn up plantations in which the slender poles bend with their own weight. In many cases, too, the convenience of shooting causes coverts to be so originated and maintained that at no stage of their growth would there be any difficulty in freely walking through them. A further reason why there is a tendency to have young trees comparatively wider apart than is usual on the continent of Europe is to be sought for in the greater moisture of our climate and its irregularity. Where the seasons are more regular and the summer is generally a long consecutive period of dryness and sunshine, the pressing need of storing moisture by the maintenance of thick shade in the woods is self-evident. Hence the trees are, till near the end of their career, kept close together, with close and interlacing canopy, and the golden rule of sylviculture is to keep the sunshine off the ground. Our climate, with its occasionally more copious summer rains and general irregularity, rather keeps this rule to some extent out of sight than invalidates it. Before we consistently neglect it, we shall do well to consider carefully the other disadvantages which follow where trees have spaces between them admitting sunshine to the ground.

Besides endangering the continuous supply of moisture in the event of a dry season, the sun in an open covert will call into existence a luxuriant growth of annual and other weeds. These increase evaporation of moisture, and interfere greatly with the formation of leafmould or humus from fallen leaves, a most valuable product which has the chief share in enriching and improving the forest soil. They also absorb a great deal of plant food, diverting nutriment to themselves, and impoverish the soil which, under a dense shade would be reserved for the sole possession and nourishment of timber.

Another disadvantage of open order with interruptions in the canopy as contrasted with full shade, will be manifested in the altered habit of growth thereby induced. Everyone is familar with the difference of form between a tree grown singly in the open field and one grown amidst a mass of timber in a close covert. When the sunlight can permeate the covert to the ground, the young tree will acquire something of the isolated type. They will form strong and numerous side branches, because their lower foliage will be kept green by the penetrating sunlight instead of being killed by darkness and contact with near neighbors. Young trees so wide apart will not be so uniformly straight, nor will they grow so rapidly upwards, being rendered irregular and starved by a quantity of branches.

It will therefore be a safe rule to close the woods overhead against the sunlight, and that during the earliest possible stage of ther growth. Thus the floor of the coverts may be kept tolerably bare of grass and weeds and covered chiefly with decaying leaves and black vegetable mould. Under such conditions the lower side branches will wither and drop off of themselves, and the principal growth will be in the stem and upwards.

Some indications will be required of the scale of distances apart which would in the earlier stages of woods be sufficiently close to secure desirable results. To specify this so as to meet all circumstances exhaustively would involve many details and would be difficult. It will perhaps be a step in the right direction, leading some way towards practical precision, to specify what is in general the most favorable distance to adopt in originating a covert artificially by planting. An approximately correct answer to this simpler question would provide a standard distance to which other cases might be referred.

Experiments with the object of determining this point are briefly referred to in his Manual of Sylviculture, by Dr. Heyer, father of the present director of the forest faculty attached attached to the University of Munich. This manual was, twelve years ago, the standard text-book on the subject for North Germany. Quoting from imperfect recollection the test laid down was, what distance apart will in 30 years, with hardly any thinning, yield the greatest cubic contents of healthy wood. He considered it sufficiently proved that three feet apart was the most favorable distance. Very numerous and satisfactory plantations, especially of common pine, are to be seen with this scale of distance, which gives each plant the space of a square yard, and requires 4,840 plants per acre. To plant much closer together would presumably produce after some years, such a struggle for existence among the young trees as might be prejudical to them, or would demand a careful attention to thinning at an early period when thinning would probably be unremunerative. At four feet apart and over, the plants would not so soon take possession of the ground by joining their branches over the growth of weeds and grasses in the clearing, nor would the trees be so numerous as to yield equal cubic contents after 30 years.

If the distance of three feet apart should sustain its advantages for plantations in this climate, as would probably be the case, a standard of distance would be furnished which would be a guide in the origination of coverts also by natural or artificial sowing. Where the seedlings in these latter came to stand much closer together it would be well to weed them out during the first five years. In case of future accidents which might reduce their numbers, it would be prudent to leave them considerably more numerous than in the pattern plantation. Where, on the contrary, there were fewer than this proportion, additions would have to be made by planting up the gaps till there were about 5,000 plants per acre.

In plantations of three feet apart maintenance operations during the first five years would be confined to the replacing of those plants which might have died, and the removal of too luxuriant and dangerous weeds. From then till their 20th year they would require little attention. Their periodical examination would probably not reveal necessity for any treatment, unless in mixed coverts the different rates of growth of different kinds of wood should render assistance necessary. Certainly in their tenth year trees three feet apart would as yet be

unlikely to suffer much from overcrowding. They would in the 15th year after planting, if they had made good progress, form a thicket through which a man would have some difficulty in passing, the ground will be well shaded and darkened, and the lower branches would be withering. In the 20th year the thickened stage would still continue. By this time some few of the young poles might have succumbed in the competition for light; these would be observable withered and dry under the shade of their taller neighbors. If the growth having been very rapid the struggle is becoming very severe in the thicket, or if the dead wood should have accumulated to such an extent that it would defray the cost of its own removal, a thinning may sometimes take place in the 20th year. Or if the growth is a little less rapid the first thinning may possibly take place on the same conditions in the 25th year, limited strictly to the dead or withering wood. Plantations will in many cases take no harm if allowed to fight their own battle to their 13th year, and then the survivor will be straight and devoid of side branches.—*N. N. in London Forestry.*

THE MECHANICAL EFFORTS OF ROOTS.

The true mechanical efforts of roots are exerted in their struggle for progress through the soil, and examples for illustration are many. To understand the magnitude of their work, we must bear in mind that each root displaces an amount of soil equal to its own bulk. Take for instance a crop of mangel wurzels, and imagine what an upheaval must have been produced in the soil by the growth of its enormous mass. The whole surface of the field is raised and its particles loosened.

In practical questions of the farm, this power is of value. Those who give turnips and mangels a place in their system of rotation. do so ostensibly for their feeding value, but beyond this, their mechanical effect is also of much importance.

The most striking results of the mechanical power of roots are seen when they come in contact with the most resisting obstacles. They have been unearthed from compact gravelly soil, where the struggle for room had been so fierce that they become distorted out of all natural shape. It is not unusual to find trees growing in the clefts of ledges, showing unmistakably that the expansion of the roots has forced the rock apart. A case is cited, on good authority, of the root of a sugar maple that had pushed its way under a rock weighing nearly two tons, and by its enlargement lifted it entirely from its bed. Trees have been observed growing on the bare rock, resting upon their roots which ran out into the soil on either side, and yet these roots, supporting the enormous weight of the tree, formed each year new growth on their under side, and lifted the tree by the space of its thickness until seven inches of wood had been formed under the severe pressure.—*Journal of Progress.*

FORESTRY IN THE DISPUTED TERRITORY.

A WINNIPEG correspondent says:—When the Privy Council awards the disputed territory to one province or the other, among the earliest measures to be considered should be a way of enforcing forestry laws in northwestern Ontario or southeastern Manitoba—whichever it may prove to be. The country is to a great extent so rocky that should the timber be once cleared away from its surface it will never grow again. No better chance for putting into practice the advice contained in Mr. R. W. Phipps' excellent pamphlet could well be found. The saw mill returns for Manitoba and Keewatin, up to October 31st of last year, show some 30 huge mills in operation throughout the province and Keewatin during the year. The returns show 25,465,841 feet B. M. of lumber manufactured during the year, 6,442,182 feet of shingles, and of lath 2,251,100 feet. Gratifying as the returns are in themselves, there is no doubt but the country is being shorn of its timber indiscriminately, and will soon be deforested unless the milling operations are controlled. The country is at that stage when a law preserving alternate strips of forest, or presenting some limits to timber slaughter could effect what never could be accomplished when once the wood is gone.

EBONIZING WOOD-WORK

There are many receipts for ebonizing, and the following are given by Mr. Harry Hems: 1. Infuse gall-nut in vinegar, into which rusty nails have been soaked; paint the wood with this, and polish and burnish when dry. 2. Wash the wood repeatedly with a solution of sulphate of iron, made by dissolving two ounces of sulphate in a pint of hot water. When dry, apply a hot decoction of logwood and nut-galls two or three times. When dry clean with a wet sponge and then polish. 3. Brush the wood with a strong decoction of logwood chips several times. When dry give it a coat of vinegar in which rusty iron has been placed. Dissolve beeswax in turpentine by setting in a warm place; apply warm with a brush, and rub it till it shines. 4. Wash with a concentrated aqueous solution of logwood several times, and then with a solution of acetate of iron of 40 deg. Baume. Repeat till a deep black is produced. 5. Put 2 oz. of logwood chips with 1¼ oz. of copperas in a quart of water, boil and lay on hot. When dry, wet the surface again with 2 oz. of steel filings dissolved in half a pint of vinegar. When dry again, sand-paper smooth, then oil, then fill it with powdered drop-black mixed in the filter. Work to be ebonized should be smooth and free from holes. Give it a light coat of quick drying varnish, then rub with finely pulverized pumice stone and linseed oil until very smooth. 6. Boil half a pound of logwood in two quarts of water, and add ½ oz. of verdigris and ½ oz. of copperas, stain, and put in ½ pound of rusty steel filings. With this go over the work a second time. 7. A pound of logwood boiled in four quarts of water, add two handfulls of walnut shells or peel, boil up again, take out the chips, add a pint of vinegar, and apply boiling. Afterwards dissolve 1 oz. of green copperas in a quart of boiling water and apply hot. 8. First sponge the wood with a solution of chlorhydrate of aniline in water, to which a small quantity of copper chloride is added. When dry, go over again with a solution of potassium bichromate. Repeat this twice or thrice. 9. One gallon of vinegar, ½ pound of green copperas, ¼ pound of China blue, 2 oz. of nut-gall, 2 pound extract of logwood. Boil all these over a slow fire, and add half a pint of iron-rust. Apply as usual. A good varnish for ebonized work is made by dissolving in alcohol some black wax.—*Journal of Progress.*

A Substitute for Mahogany.

An imitation of and substitue for mahogany, useful in fine manufactures, is due to French ingenuity. The first operation is to plane the surface of any species of close-grained wood until it is perfectly smooth, and it is then rubbed with diluted nitrous acid, which prepares it for the materials subsequently to be applied. These consist of one and a half ounces of dragon's blood, dissolved in a pint of spirits of wine, and one-third of that quantity of carbonate of soda, mixed together and filtered, the liquid in this state being rubbed, or rather laid upon the wood with a soft brush. The process is repeated with very little alteration, and in a short interval the wood possesses all the external appearance of mahogany.—*Warren's Monthly Review.*

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain and cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup for children teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentery and diarrhœa, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for children teething is pleasant to the taste, and is the perscription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

SURE SIGNS.—Distress before or after eating, loss of appetite, belching of wind, heart-burn, irregular action of the bowels, and nervous irritability are sure signs of Dyspepsia. The sure cure is Burdock Blood Bitters. Procure and read the testimonials.

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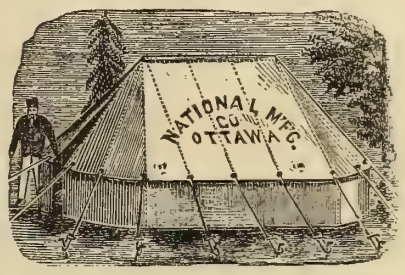
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DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

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PETERBOROUGH, Ont., FEB. 1, 1884.

DEER are so plentiful around the Michigan and Wisconsin pine lands that the boys in the camps often enjoy venison steak in spite of the law.

IT is the intention to bank on the Chippewa and tributaries, in Wisconsin, not far from 600,000,000 feet this winter, although there are not over two-thirds as many camps as last year.

MANY portable mills have been set up in the woods of Maine for the purpose of working up the timber blown down by the winds lost season. An unusual number of trees were thus prostrated.

THE Surveyors of the American & Mexican railway report that there are immense forests of cedar and pine in the southeastern portion of Chihuahua. The entire Sierra Madre interiors are heavily timbered.

INDICATIONS from Wisconsin point strongly to the fact that there will be no reduction in the lumber cut in that state. In fact many of the heavy lumber firms there will greatly exceed their former output.

IN some of the large saw mills in the Northwestern lumber district a small appliance is attached to the trimmer, which automatically stamps the name of the company or mill on every board that passes over the machine.

THE first through train to Menominee, over the Milwaukee & Northern branch, arrived January 8. Regular trains were to be running on January 14. This connection gives Menominee a new rail outlet for lumber south and west.

THE Muskegon lumbermen and the city treasurer are at loggerheads over the place where logs shall be assessed, the assessors claiming that they should be assessed in Muskegon, and the lumbermen that they should be assessed in the township in which the logs may be at the time of assessment. It is likely to lead to protracted litigation.

A Mr. Carpenter, in the Thunder Bay district north shore of Lake Superior, in Canada, is running a number of camps on Slate river, Blake township. On December 29 he had 10,000 or 12,000 feet of logs skidded, but there was not snow enough to haul them to the bank.

IN ten years there was to be a scarcity of timber in Canada, but certainly it has not been felt in this country as yet, nor is it likely to be so this year, when native timber is, as we have shown, cheaper than it ever was known, and our foreign supplies are on as bountiful a scale as the requirements of our trade can keep pace with.

EARLY in the spring of 1884, the Seattle, W. T., mill of the Columbia & Puget Sound Railway Company, will be sent to the Green river coal mines, while the company will build a much larger one at Seattle, the foundations for which are already driven. The new mill will be 60x190 feet, two stories high, with an engine and boiler room 40x60 feet one story. It will be owned by the Oregon Improvement Company and will be first class in every respect.

THE Newmarket *Era* says :—The new automatic pail-handle borer is running nicely, putting holes through 40 handles per minute, an increase of 25 on the old method. The handles are then turned and shaped at the rate of 35 or 40 per minute. The firm is now inventing another machine to bore four holes and cut a groove in the rim of a washboard all at one time. Messrs. Cane & Son will soon have the manufacture of small woodenware down to a fine thing.

A CORRESPONDENT at Roscommon writes that since the good sleighing set in many lumbermen have begun erecting camps who thought they would not lumber this winter, and will put in a large amount of logs. Parties are also heavily engaged all along the railroad from Bay City to Mackinac in getting out ties, posts, telegraph poles, hoop poles, cedar for paving, hardwood and hemlock bark. Take it all around, this is likely to be as good a winter for lumbering as last winter.

THE *Lumberman's Gazette* says :—The weather for the past week has been propitious for logging operations, both in Michigan and Wisconsin. The snow is abundant for hauling purposes, and the logs are being banked with wonderful rapidity. The vast amount of logs which had been previously put on the skids will keep the logging roads lively for some time to come, and the probability is that during the last week in December and the two succeeding weeks, the first in the new year, there will be more logs banked in both these pine producing states than has ever been known in the same time during the history of the business.

THE first person who attempted to submit wood to distillation for the purpose of obtaining gas and other products, was Philip Lebon, near the close of the last century ; and in 1799 he took out a French patent for methods of using combustibles with greater economy, as well for heat as for light, and collecting the different products. Three years later he obtained the use of a part of the Rouvray forest, near Havre, for the manufacture of tar, engaging to deliver five quintals, about 1,100 pounds a day, and with apparatus of large dimensions he was able to supply a notable quantity of tar for the French Marine. He died in Paris in 1804, and the business was continued to 1811.

FREE LUMBER.

The strongest characteristic of the New York *Sun* is persistence. Whenever it takes hold of a subject it never lets go till it is squeezed dry. Last year the *Sun* was the leading advocate of placing lumber on the free list. The movement was very properly killed in Congress. Since Congress re-assembled that paper has again taken up the cudgel in favor of "free lumber" and has been hammering away at it since at the rate of one to two columns daily.

The usual routine was followed. First, an alarming editorial appeared concerning the devastation of the Adirondack forests situated in the Northern part of the State. Not that the devastation flooded the New York markets with lumber, but because the destruction disturbed their fluvial functions and threatened the water supply of the Hudson river and othe streams. Then followed leaders on "The Flow of Rivers;" "The Forests of the United States," and so forth till the object in view was reached—"Free Lumber." As to the purchase by the state of the Adirondack forests, to preserve them, we have nothing to say, further than to wish the scheme the fullest success ; but when the press of New York ask that they be preserved by removing the duty from lumber and thus placing the forests of Canada in direct competition with those of the South we earnestly protest.

It is well known that vast sums of money have lately been invested in Southern pine land purchased from the Government. It is also well known that the $2 per 1,000 feet tariff paid on Canada lumber does not prevent it from being brought into competition in New York markets with lumber from Southern forests. Our woods bring little enough now in Eastern markets. To further embarass the trade with free lumber would be unjust and a species of bad faith on the part of the government after so recently disposing of millions of acres of pine lands.

The people of Maine, Michigan and Wisconsin, who are next door neighbors of Canada, probably understand this matter better than the thirsty editors of New York city, and it was due to the representatives of those States that the move for free lumber was killed in the last Congress. The lumber business of the South is just assuming creditable proportions and needs other stimulus than competition with foreign forests, and we hope the representatives from the timber States of the South will take an active step in seeing that the duty on lumber is not removed. To do so would seriously embarass those who have already invested in mills and lands, and retard large investments already in contemplation.—*New Orleans American Lumberman.*

THE U. S. DUTY ON LUMBER.

The Detroit *Fret Press* says :—If, as some of the lumbermen claim, the removal of the tariff on lumber will not effect prices, because, as they say, lumber is now sold more cheaply than Canadian lumber can be laid down in the states, there is no reason why they should object to a reduction or removal of the duty. On the other hand, if it will reduce prices, it can only do so by stimulating the destruction of the Canadian forests. If this should be the case, the result would be to give more employment to the men who wield the axe and do the laborious work. It would perhaps keep some of the Canadians at home who now annually come to Michigan during the logging season, and if they are provident take out of this country the net proceeds of their work. This would diminish the supply of working lumbermen in Michigan, and by the necessity of the case increase the rate of wages, which, in spite of all the fine talk we sometimes hear, is now so low that a Michigan worker in the woods who has a family to support finds it hard work to make a decent living.

As consumers would not be detrimentally affected by a reduction of the duty on lumber, and as wage workers could not possibly be, the only question to be considered is whether the millionaire lumber kings would suffer the direst disaster if their profits were, by any possibility, slightly reduced. Let any one examine a list of the very wealthy men of Michigan, and he will be struck with the great proportion of them who have made their fortunes in lumber and pine lands. They always obtained the highest prices they could for their land and commodities, and hired their labor as cheaply as they could get it. Their fortunes were not made by wielding the axe or skidding logs at $16 a month and board.

WOOD WASTES.

As we see the forests annually shorn of their monarchs, the question naturally arises, what will take the place of timber? Again as we see the very small proportion of a tree that is really utilized as a paying product, we are led to inquire, why can't this waste be utilized? The question of grinding up and making artifical wood is too expensive, and the best thing that can be done is to submit this residue or waste to some process by which the preservative qualities can be extracted and be used to preserve the timber or lumber used for building fences, furniture, etc. We are informed that the process of doing this is not expensive or intricate, that it effectually preserves wood from decay for an indefinite period, and hence is very profitable. We are informed that one company engaged in this business who pay $3 per cord for what in many locations south is thrown away, pay a semi-annual dividend of over 80 per cent.

If this be true why not have the subject discussed by those acquainted with the processes? We have fences, houses, railroads, and other erections going up all the while, and if northern brains were coupled with their money southern grit and push, this could be made a great industry. If those living in localities about here where wood is plentiful and cheap, will take the trouble to investigate, they will experienc no trouble in finding parties who know all the secrets and have ample capital to push it. People north say that people south have a peculiar faculty of keeping hid many of the facilities which they possess in sufficient number to enable them to complete success fully with some kindred enterprise east and north ; as proof of which look at our iron and coal a few years ago and compare with the development of to-day.—*L, D. Foutz, in Nashville Artizan.*

CANADIAN COAL.

The last two or three years have witnessed a decided increase in the production of coal in Canada. Not only has the home consumption been fed more largely, but the quantity exported grew from 249,536 tons in 1877, to 421,311 tons in the fiscal year 1881. The produce of the coal mines of Nova Scotia during the first three quarters of 1883, amounted to 1,078,996 tons, an increase over the same period of the previous year of 97,463 tons. Sales during during the same period aggregated 996,060 tons, an increase of 93,137 tons. At the port of Sydney, C, B., the quantity exported rose from 128,000 tons five years ago, to 313,000 tons last year ; while this year, up to the end of October, the shipments of coal from Sydney reached 488,000 tons ; allowing for the probable shipments of the two remaining months of 1833, it is likely that 500,000 to 550,000 tons of coal have left that harbor during the year just closed more than half of it going up the St. Lawrence. Then at Pictou the coal shipments have increased in a decided degree. We need not stop here to consider in detail the benefits this activity confers, upon the port and neighboring country, though these cannot be overlooked by any observer. But we will only remark that the shipping of Pictou has felt an undoubted impetus ; and as for North Sydney, the arrivals of shipping up to the 1st of November, were 1,151 in number, compared with 896 in the same period of the preceding year : the tonnage of these was 520,000 tons, where the tonnage of the port in the whole year 1879, did not reach 250,000 tons. The mines give direct employment to about 1,500 hands. These are figures which speak for themselves.

The foreign market usually takes from three hundred to four hundred thousand tons of coal. Newfoundland took last year 57,004 tons ; the United States 105,943 tons ; the West Indies, 19,367 tons Nova Scotia coal. China, the Sandwich Islands and California took their Canadian coal from British Columbia. This year probably 30,000 tons have gone to the United States from Cape Breton, mostly of fine sea coal, for a large part of the coal beds thereabout are under the Atlantic. Further developments of this important trade are being made. For example, The General Mining Association is about opening a new mine at Low Point ; and will build an extensive pier at Sydney Harbor, which will be made their shipping point, instead of Lingan. Montreal capital is understood to be extensively used in the operations which are to develop that part of the Island of Cape Breton, and there is every indication that the coal interests of the Dominion are among the most promising, as they unquestionably are among the most immediately prosperous. Some

harm was done, perhaps, rather than good, by the pretty extensive shipments made by Beard, of Montreal, who bought Cape Breton coal for cash and shipped it to Montreal, where he glutted the market. Another Cape Breton colliery is that of the International Coal Mining Company, at Bridgeport, which put out in 1882 we are told, 110,000 tons; it employs 300 hands.

At Stellarton, the output of coal was 141,090 tons last year, and the manufacture of coke amounted to 12,512 tons. Pictou and New Glasgow have various colleries, and employ miners by the hundred, The mines, near the Bay of Fundy, now owned by the Cumberland Coal and Railway Co., and known as the Springhill Mines, employ 500 hands, and put out from a quarter of a million tons upward per year,—*Monetary Times.*

CHOPPING DOWN A TREE.

The Boston *Transcript* says that the chopper works upon one bended knee. Before beginning to cut, he has looked to see which way the tree is inclined. For this he steps back a short distance to where he can see to its very top. If he is in doubt he lifts his axe by the end of the helve and lets it hang freely suspended. This gives him a plumb-line by which he measures the inclination of the tree. But it is not enough to determine in what direction the tree will fall most readily. It may be that large trees are standing right in the way of its falling on that side, and against these the tree will be lodged. It must be carried to the one side or the other, and herein consists one of the mysteries of wood-craft—the skill to guide a tree in its fall. He will direct it with the greatest ease. Having decided where he wants it to go to avoid the risk of lodging against other trees, or of being broken by falling on uneven ground, or to have it lie so that the logs will be convenient for removal, the chopper first undercuts the tree—that is, he cuts upon the side towards which he will have it fall, and in such a manner that the line of the kerf shall be exactly at right angles with the line along which the tree is to lie. If the tree stands nearly perpendicular, and has no inclination to fall as he wishes, the chopper cuts a little beyond the heart on that side. By doing this he removes the base when the tree is ready to fall, and rests upon a base of but an inch or two in breadth, so much from the centre of the stump. The effect of this will be very great in movin gthe base so that the centre of gravity will be on the side desired. Though he works in a cramped posture, the chopper cuts the stump so level and so smooth he thinks his little boy could spin his top upon it.

Having undercut the tree with the greatest care, the woodman now changes his position a little, but remains on the same side, rests on his other knee, and shifts his hands, that is, wields the axe with the other hand forward. He now cuts upon the other side, leaving the stump two or three inches higher according as he wishes to gain advantage for the last few strokes. The work goes on with little concern until the base is no thicker than a plank, and quite as even; then a blow is aimed full at the centre, and the chopper looks quickly at the top to note the effect. If he perceives a tremor in the trunk, or if a bit of bark or moss is loosened from its hold, he knows now every stroke will tell, and he aims them with the greatest precision. Soon as ever the top bows to its fall he marks the direction in which it is moving. If he wishes to bring it more toward him, he strikes a blow upon the farther edge; if to carry it farther from him, the blow is given upon the side that is nearer. These last strokes need to be given with great nicety. If feeble, they will fail to effect their purpose; if of too great force, the tree will be severed from the ustmp upon that side, and then all control of it is lost at once, and it plunges blindly forward. A tall tree like the pine is broken from the stump by a force acting quite differently from that which is applied in the case of shorter trees. In its descent the pine acquires at its top a centrifugal force so powerful as to lift the tree from the stump and carry it forward five or six feet before it reaches the ground. When it does come to the earth the top and the butt strike at the same time, and the tree lies half buried in the snow.

BOARD OF TRADE RETURNS.

The following are the returns issued by the Board of Trade, for the month of Dec., and for the first twelve months of the year:—

MONTH ENDED 30TH NOV., 1883.

	Quantity. Loads.	Value. £.
Timber (Hewn).		
Russia	11,063	25,147
Sweden and Norway	39,443	61,056
Germany	22,849	52,889
United States	6,404	30,150
British India	1,231	19,560
British North America	24,056	114,830
Other Countries	40,937	53,538
Total	145,983	357,165
Timber (Sawn or Split, Planed or Dressed).		
Russia	46,647	102,814
Sweden and Norway	74,179	178,048
British North America	62,308	159,058
Other Countries	15,236	51,413
Total	198,370	491,333
Staves, (all sizes)	8,820	67,664
Mahogany (tons)	2,018	17,877
Total of Hewn and Sawn	344,353	848,490

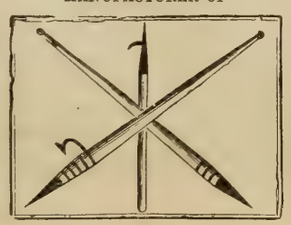
TWELVE MONTHS ENDED 31ST DEC., 1883.

Timber (Hewn).		
Russia	230,490	558,574
Sweden and Norway	630,041	994,857
Germany	350,243	896,125
United States	111,285	433,763
British India	41,531	587,710
British North America	336,184	1,603,073
Other Countries	392,831	525,650
Total	2,142,605	5,599,752
Timber (Sawn or Split, Planed or Dressed).		
Russia	1,075,574	2,463,123
Sweden and Norway	1,717,072	3,843,487
British North America	1,181,606	3,010,218
Other Countries	339,381	1,085,705
Total	4,313,633	10,407,533
Staves (all sizes)	141,189	640,321
Mahogany (tons)	49,784	490,689
Total of Hewn and Sawn	6,456,238	16,007,285

SINGERS and public speakers are always benefitted by using Down's Elixir, as it removes the hoarseness and increases the power of the voice. Take small doses often. Price, 25c, 50c, and $1.00

NARROW CHANCE OF ESCAPE.—A person exposed to the sudden changes of our northern climate has little chance of escaping from colds, sore throat, rhumatism, frost bites, and other troubles incident to change of temperature, to say nothing of accidents and emergencies. The best external and internal ready remedy is Hagyards' Yellow Oil.

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At OWEN SOUND,
Two Hundred Thousand Feet of Lumber,
Composed of about 50,000 clear, balance flooring, bill stuff (long), stocks, common.
Also, a stock mill-run, mill culls out, from
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Pure Manilla Rope
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ST. LAWRENCE CANALS

Notice to Contractors.

SEALED TENDERS, addressed to the undersigned and endorsed "Tender for St. Lawrence Canals," will be received at this office until the arrival of the eastern and western mails on TUESDAY, the 12th day of February next, for the construction of a lock and regulating weir for the deepening and enlargement of the upper entrance of the Cornwall Canal.

Also for the construction of a lock, together with the enlargement and deepening of the upper entrance of the Rapide Plat Canal, or middle division of the Williamsburg Canals, and the deepening, &c., of the channel at the upper entrance of the Galops Canal.

A map of the head or upper entrance of the Cornwall Canal and the upper entrance of the Rapide Plat Canal, together with plans and specifications of the respective works, can be seen at the Resident Engineer's office, Dickinson's Landing; and for the works at the head of the Galops Canal, at the Lock Keeper's house near the place, and in each case plans, &c., can be seen at this office on and after Tuesday, the 29th day of January, inst., where printed Forms of Tender can be obtained.

Contractors are hereby informed that trial pits have been sunk on the CORNWALL and RAPIDE PLAT sections of the works, and they are requested to bear in mind that tenders will not be considered unless made strictly in accordance with the printed forms, and be accompanied by a letter stating that the person or persons tendering have carefully examined the locality, and the nature of the material found in the trial pits, &c.

In the case of firms there must be attached the actual signatures, the nature of the occupation and residence of each member of the same; and further, *a bank deposit receipt* for the sum of $4,000 must accompany the tender for the Cornwall Canal Works. The tender for the Rapide Plat works must be accompanied by *a bank deposit receipt* for the sum of $3,000. The tenders for the deepening, &c., at the head of the Galops canal must also be accompanied by *a bank deposit receipt* for the sum of $3,000. The respective deposit receipts (cheques will not be accepted) must be endorsed over to the Hon. the Minster of Railways and Canals, and will be forfeited if the party tendering declines entering into contract for the works at the rates and on the terms stated in the offer submitted. The deposit receipts thus sent in will be returned to the respective parties whose tenders are not accepted.

This Department does not, however, bind itself to accept the lowest or any tender.

By order,
A. P. BRADLEY,
Seeretary

Dept. of Railways and Canals, }
Ottawa, 21st, January, 1884. }

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THE UNDERSIGNED having largely extended their raceway at Lakefield, are desirous of corresponding with parties who wish to go into manufacturing, and they are prepared to sell or lease water power on the most favorable terms, or would erect buildings of any size suitable for factories.
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THE EWART LINK BELT.

We give our readers an admirable illustration of Ewart Detachable Link Belt as applied to live rollers and continuous conveyors in a sawmill, operating with great ease and economy by automatic labor saving machinery from the saw log to the manufactured lumber, &c., and to the removal of the sawdust and other refuse. The cut and the references by figure and letter to the various details give so clear an idea of the mode of application that no long description is required. One great advantage which this link belting possesses is its adaptability for use in either wet or hot situations, where other belting would soon be destroyed. Even in other cases there is greater strength and less wear and tear, and there is less loss of power by friction. Its mechanical fitness for application to sawmill requirements is also obvious. It is made of refined malleable iron and is carefully tested to two-and-a-half times its tabulated working strain.

The sole manufacturers of this belting in the Dominion, are the Waterous Engine Works Company, of Brantford, Ontario, who will be happy to afford any further information on the subject to those who are contemplating the introduction of these belts into their mills. They are already used in many leading establishments.

PLANTING AN OAK GROVE.

It is not such a difficult matter to raise an oak grove if one has the patience to wait for it. Oak trees will grow as readily from acorns as apple trees will from seed, if only the precautions are observed. An immense fortune awaits the man who will set out 160 acres to the white oak, and carefully attend to it for a series of years; for this kind of timber when small, is in constant demand by coopers, by railroads for ties when larger, and by wagon and agricultural implement manufacturers when grown. An acre of ground contains 43,650 feet of land. Planted to acorns in rows three feet apart and one foot in the row and it would give 14,536 trees to the acre, or 3,325,760 trees to the quarter section. Supposing now this amount was divided by two, to cover losses, and it leaves the respectable sum of 1,162,880 trees on the 160 acres. When of a suitable size, two-thirds of the trees, or 775,000 might be cut for hop poles at, say $6 per thousand, or over $46,000. The remainder, 387,000, if allowed to grow until they were large enough for railroad ties, would be worth $75,000 more, to say nothing of the balance for fire wood, which would be no inconsiderable sum. If a portion only of them were cut out and the balance allowed to grow into a forest of large trees, their value for timber would be a fortune to the happy possessor.

The above may seem visionary and probably to a large extent is, but it is certain that if one has the patience to start the grove and will give it proper care, and can afford to bide his time for the trees to grow, that there is a fortune awaiting him. Some years ago we had a talk with a prominent railroad builder on this subject, and he declared it as his belief "that land could not be put to more profitable use than in growing a forest of oaks for railroad ties." Taking the poles, the fire wood and the ties together, it would not require a life time to wait for the beginning of an income. In the old world the planting of oak forests is a branch of governmental work. It has been found that the tree requires a deep and humid soil to come to its full development. If it be sandy with some clay mixed in, the better. The oak has a tap root which permeates deeply in the sub-soil, and if the latter be hard the tree languishes and never attains much size. The soil should be at least three feet deep, and the richer it is and the faster the tree grows, the tougher and more valuable the timber. Hence, cultivation is of value in its propagation not only for promoting growth, but also for increasing its toughness and elasticity.

Should any of our readers be seized with a desire to carry out the suggestions here made, here are a few points that may be of value. Gather the acorns in October, or at a time when they begin to fall of their own accord. Take them to a cool place to dry and rake over daily until the dampness is off. Whether it is better to plant in the fall or spring we cannot say, but either course is pursued. A little experimenting for a season would decide this. If kept over till spring, the following method is recommended by the foresters of France.

"Place in a dry spot in piles three feet high, cover a foot deep with dry leaves; over this a half a foot of dry moss, and over this a half a foot of long straw, capping the apex to keep out the water. Plant in the spring, and they will sprout without delay."

The young seedlings should not be disturbed the first year, as the tender rootlets are very sensitive, though of course the weeds must be kept down with the hoe. The second year they can be cultivated some, and the third year thoroughly so. In regard to the time required to grow the trees we have no data. The oak will grow much faster, however, than one might imagine, if it be properly cultivated. We have on our grounds, in Minneapolis, nearly 100 young white, black and burr oaks, the bulk of them being of the first named variety. No data has ever been made regarding their growth, but trees that were not more than two or three inches through nine years ago are now some of



THE EWART LINK-BELT FOR IMPROV

1.—Haul-up Works for hauling logs to circular saw.
2.—Continuous running rolls for conveying slabs.
3.—Dead rolls for receiving outside slabs
4.—Half rotary chains for moving slabs laterally to slab-cutting table.
5.—Slab-cutting table.
6.—Slab and refuse conveyer.
7.—Continuous running chains, for moving second or third-cut slabs laterally to the edger rolls.
8.—Edger Rolls.
9.—Lath length cutting table.
A.—Heavy chain trucks for moving the squared log to gang rolls]
B.—Gang rolls.
C.—Gang of saws.
D.—Live rolls for conveying the boards from the gang to the trimmer table.

them six inches, and that, too, without any cultivation whatever. A clump of nearly 50 of them which made an open kind of shade at first, is now in summer time a thick grove, though which the sun can scarcely penetrate. At a rough guess, we should say that in ten years, with cultivation, the trees might be large enough to sell for hoop poles, while it might take fifteen more for them to be ready for railroad ties. A few acres might be set out each year for as long a period as the person experimenting wished to try it. Acorns can be found almost anywhere through southeastern Minnesota, but there are, perhaps, as fine large oaks in the vicinity of Albert Lea as any place, where one could procure plenty of seed.—*Minneapolis Tribune.*

EVERYTHING AT SECOND-HAND.

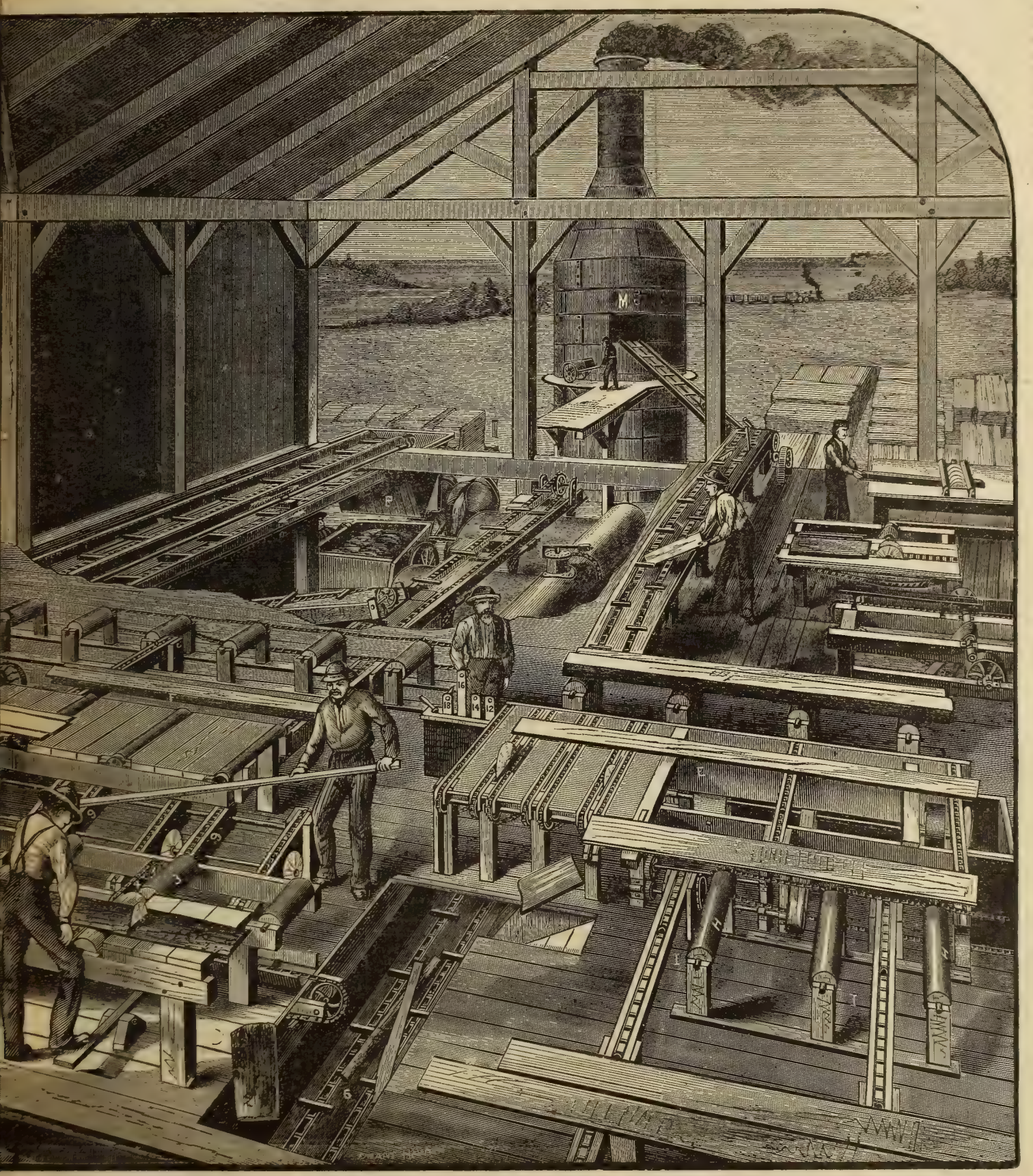
"This business is fifty years old," said a New York dealer in second-hand material. "We occupy nearly 40 city lots. They are covered with second-hand building material. We can supply brick for interior walls, or granite columns for ornamental high stoops or porticos. It is already for use, and it is of known quality. We have thousands of feet of timber and lumber of various kinds. Every kind of lumber used in building a house can be found here, joists studding, rafters, and roof boards. The roof itself can be had too. Tin deteriorates some, but slates do not so much. We can supply a tin roof that is as good as it was the day it was laid. We have several cords of slates. Our lumber is better than new. It is thoroughly seasoned. We supply the lumber for about all the swell mansions. Every piece of timber in Vanderbilt's mansion came from this yard. When men put thousands of dollars into frescoes they want to be certain there will be no shrinking in the timber of their houses."

"You do not confine your attention to dwellings, do you?"

"Your question reminds me of a man from a neighboring village who came here. He said he guessed he had got an order that it would puzzle us to fill. He wanted a second-hand pulpit. He was astonished when I showed him a complete outfit. We had stained glass windows, crosses, alters, candlesticks, rails, mourning benches, a sprinkling bowl and a baptistry. I showed him a full assortment of pews for the body of the church. Then I offered him a second-hand steeple with a bell complete, and all set up. He bought a pulpit and paid for it in silence. He was so astonished he couldn't talk. We have everything neccessary to fit out either a mansion on 5th avenue or a shanty for a squatter sovereign; we just sold a pair of Italian marble mantels that probably cost $500 each when new. They are as good now as then. You can almost see through them they are so clear, and the carving is exquisite. Then we have mantels in various kinds of colored marble, and two in Mexican onyx that are beautiful. Booth's Theater is now making its way here piecemeal. Here is a desk that was made in the time of Queen Elizabeth."

"How much of a business is it?"

"Ours is not the only yard. Last year we sold $35,000 worth of fire wood from the waste, and the total sales amounted to a little more than $250,000. We used to give the kindling wood away. Now it keeps a good many teams going especially in the winter. We have 317 men on the pay roll. Their pay is high. It takes as great skill to take fine work out of a house as to put it in." *New York Sun.*



EVATING AND CONVEYING MACHINERY.

E.—Trimmer table, for cutting off imperfect ends to requisite length.
F.—Carriage for edged boards when ready for trimmer.
H.—Rollers for receiving boards from trimmer,
I.—Lateral chains for conveying boards to car
K.—Elevated track for board car.
L.—Where barrel stave and lath lengths are selected and taken from slab-conveyer.
M.—Refuse burner.
N.—Counter dust conveyer from circular saw, discharging sawdust into main conveyer.
O.—Main sawdust conveyer, running to boilers.
P.—Receptable for refuse, bark, &c.
R.—Appliances for loading logs from water on cars

A Swedish Match Factory.

At Jonkoping, Sweden, is the oldest and largest match factory in the world. It was established 100 years ago, and there are now to be seen specimens of the matches used at the beginning of the present century, consisting of big fagots of wood furnished with a handle and a tip to dip in a bath of sulphur. The wood from which the present kind of matches is made is taken from the adjacent forests, which are divided into fifty sections. Every year one section is cut and then replanted with young trees. The trees are hewed into planks in the forest and cut into slivers in the factory. The boxes are made of the outside of the trees. The factories are on the banks of the lakes which are connected with one another by wide canals. Millions of matches are turned out each day. Some idea of where they all go to may be obtained from the statement that there are at least 280,000,000 of matches burned each day in the United States, or an average of five matches for each person

CHRISTMAS in England has interfered more with the dock deliveries than it did last year, for there was a smaller quantity by 278 standards of sawn and planed wood, and more than 600 loads short of hewn timber last week, as compared with Christmas week of 1882. Whether business was less brisk, or its followers a litttle more inclined to jolity, it is hard to say. But if the arrears are made up next week, or the week after, we shall be inclined to ascribe it to the latter cause, and that their holiday being over men have returned to their avocations with renewed energy and a determination to make up by close application to business the time they have lost.

SUBSCRIBE at once for the CANADA LUMBERMAN.

Market Reports.

MONTREAL.

From Our Own Correspondent

Jan. 25.—There is nothing new to report in the state of the market, which has been quiet and in favor of large buyers. Business on the whole has not been satisfactory either at home or abroad, and some are endeavoring to create the idea of their being a very considerable shortage in the manufacture this year. The imports by rail are coming to hand slowly, owing to heavy snow storms blocking up the roads. Laths are still scarce and retail lots bring our outside figure. We quote yard prices as follows :

Pine, 1st quality, ℔ M	$35 00@40 00
P ne, 2nd " ℔ M	22 00@24 00
Pine, shipping culls, ℔ M	14 00@16 00
Pine, 4th quality deals, ℔ M	11 00@12 00
Pine, mill culls, ℔ M	10 00@12 00
Spruce, ℔ M	10 00@13 00
Hemlock, ℔ M	9 00@10 00
Ash, run of log culls out, ℔ M	20 00@25 00
Bass, " " ℔ M	17 00@20 00
Oak, ℔ M	40 00@50 00
Walnut ℔ M	60 00 100 00
Cherry, ℔ M	60 00@80 00
Butternut, ℔ M	35 00@40 00
Birch, ℔ M	20 00@25 00
Hard Maple, ℔ M	25 00@30 00
Lath, ℔ M	2 50@ 3 00
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 50@ 0 00

CORDWOOD.

The demand, notwithstanding the continued very cold weather, has not been brisk. The higher rates of railway freight have not as yet affected prices, but it has had the effect of lessening the supplies. There is not much wood getting out at present as the roads in the country are blocked up with snow, and it is not expected that much will be done till a thaw comes, meantime our prices are firm but unchanged, We quote at the wharves ex cartage :

Long Maple	$ 6 50
Short "	6 00
Long Birch	5 50
Long Beech	5 00
Tamarack	5 50

LIVERPOOL MARKETS.

Our mail advices up to the 1st inst. call business quiet, but not more so than usual at this season. The stocks of Canadian lumber there on the 31st of Dec. were as follows :

	Feet. 1882.	1883.
Quebec square pine	292,000	459,000
" waney pine	275,000	349,000
St. John pine	51,000	30,000
Other ports pine	66,000	90,000
Pitch pine hewn	629,000	305,000
" " sawn	606.000	530,000
Canadian and Nova Scotia oak	335,000	330,000
Oak plank	104,000	182,000
Quebec deals	8,482	8,459

Private sales of spruce deals were reported at £6 15s. for St. John and £6 10s. for lower port, and by auction at £6 14s. 9d. for Dalhousie.

TORONTO.

From Our Own Correspondent.

Jan. 23.—The long continued severe frost combined with a great depth of snow, prevents any attempt at building, so that trade is completely at a standstill. About twelve cars of lumber per day is all that has come into this city by rail during the past two weeks, and part of that intended for use on the harbour improvements going on. The large quantities of cordwood and slabs coming in serves in some measure, however, to keep the railway companies rolling stock partially employed. A few cars daily of last season's accumulation in the yards here are being worked off to western points, and if the railway companies would grant liberal rates from the mills to western points limited shipments might be made during the winter months. The N. & N. W. Company have offered some slight concessions from places where the water routes come into competition with them during the navigable season, but that is useless ; lumber at such favorable points for shipment will remain there until the opening of the spring. Through their own cupidity they have lost this trade, and it will require much greater concessions than those now offered to regain control of that trade. Lumbermen feel much annoyed at the constant changes and innovations discriminating against their business here. Since the first of this year the G. T. R. Company assumed entire control of the Midland railway, and the first change made was to shift the agents office to a small hole and corner affair down at the Don, where it is highly dangerous to life and limb to attempt to go and transact business, and for the fourth time during the last twelve months a fresh agent has been appointed ; this seems to be a favorite plan of the company in question, just as soon as the agent has got to understand the wants of the lumberman and a cordial state of feeling existing between them the connection is suddenly severed. Lumbermen have been given to understand that Mr. White retains all the power he formerly held in the management of the Midland system, if this is the case they would like to see him and explain in person some of the grievances under which they labor, and if he has not the same control which he formerly held we fear his mantle has fallen on unworthy shoulders.

The N. & N. W. Railway Company have introduced another innovation, or, as they call it, fresh rules from the board. It has been the custom hitherto when any dealer had incurred the penalty of demurrage through the detention of a car from any cause whatsoever, to go to the local freight agent and place their plea before him, and if through stress of weather or other causes which often arise to prevent the prompt unloading of cars the agent used his own discretion in remitting the penalty, but now under *the fresh rules* it must be paid and the case presented before the board of directors for a judication. O, ye Gods, picture to yourself the grave spectacle of a board of railway directors sitting in solemn conclave over the momentus question : Shall we split this two dollar bill, keeping one-half ourselves or as we have it in possession shall we keep the whole. The latter feeling I imagine most likely to predominate. It is now in fact got to be absolutely considered a rash act for a dealer to be guilty of winking if standing near one of his own cars of lumber, for fear any of the railway officials may notice him and construe it into an unwarranted act of jubilation at having got the better of the company in some shape on that particular car of lumber, but the day of retaliation is surely at hand ; 1883 shows a falling off of nearly 20,000,000 feet from that of 1882, and that in a traffic which has hitherto given them over 40 per cent. of their total freight earnings. The time is coming rapidly when they will be glad to cultivate a trade which up to the present time they have burdened with heavy restrictions.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
Scantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 50
Three uppers, Am. inspection	35 00@45 50

B. M.

1½-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	3 00
Sawn Lath	2 50

OTTAWA.

From Our Own Correspondent.

Jan. 24.—The lumbermen of the Ottawa valley are not carrying on such shantying operations this season as in the past four or five years. They have had a very favorable winter, but are afraid of next year's demand. There is a large quantity of square timber and logs in market at present, little of last year's cut having been disposed of during the past summer and fall. Very few new shanties have been opened on the tributaries. Labor is comparatively cheap, but the demand has been long ago satisfied. A prominent lumberman has informed your correspondent that the total cut this winter will not amount to much more than a half of that of last season. This will have the effect of bringing the market into a steady condition. Allan Grant, one of the prominent merchants, who took out seven rafts of square timber last year, will not have one this year. On the Kippewa limits the number of shanties is not increased and a few are not in operation. Gilmour Bros. have two ; A. Grant two ; Booth & Gordon two ; O. Latour one ; D. Moore one ; Sherman, Lord & Hurdman three ; Edwards & Co. two ; J. & B. Grier one ; the latter is taking out square timber solely, and all the preceding ones are taking out logs and one or two square timber.

As regards the stock on hand in the yards here it is fast reducing, although yet pretty large. The demand is somewhat dull. Within the past year the facilities for shipping have increased to a large extent owing to the extension of the C. A. R. into the lumbering district. Competition is keen between this Company and the C. P. R. on American shipments, and the rates have been reduced considerably. A large quantity of lumber is at present being shipped by rail. Next spring will witness a lively time between the boats and the railway Companies in their competition for freight. The leading boating companies seem confident of securing their usual share, and even have added considerably to their fleets. They expect to compete successfully with the roads, and, furthermore, they claim they will be able to reduce the rates to such an extent as to make it unpleasant for the railway companies.

Within the past few years a large number of foreign dealers have appointed permanent representatives or agents here. The Sheppard Morse Co., of the United States, is about the largest buying firm here. The head officers of the Company arrived in the city to-day, and are negotiating for next year's stocks.

Few measures affecting the lumber industry have been entered for consideration at the present session. In connection with the report of the Minister of Public Works, laid on the table a few days ago, there was an appendix to it submitted by the Chief Engineer of the Department, referring to the proposed improvements on the Upper Ottawa river in the interest of the lumbering trade of this district. The works asked for are of two different distinct objects. They are as follows :—

1. To increase the length of navigable waters above the confluence of the Mattawa, by placing a dam at the head of the Mountain Rapids, and thus to obliterate the Long Sault and create comparatively still water extending to the head of Lake Temiscamingue, a distance of say 90 miles, and for some miles as well up the Riviere Blanche, thus bringing navigation by steamers to a point within twelve miles of the C. P. R. at Mattawa.

2. To place a dam at the foot of Lake Temiscamingue for the purpose of raising the water in the lake to a certain height (to be hereafter determined) above its normal level, with the object of holding such water until the occurrence of the period when that in the Ottawa, at any point in its course to the Chaudiere Falls, has fallen so low as to impede or prevent the running of timber or logs, and then by the raising of the gates or opening of sluices, to permit the water or a portion of it so penned up to pass into the river, and thus to flush the logs and timber down the stream. The report from the engineer remarks upon the foregoing demand as follows :—"It may thus be seen that these two projects are antagonistic. If the dam were built at the Mountain Rapids for the purpose of navigation, then the river below for milling and rafting purposes would remain as it is at present, and no advantage would be derived by the mill owners at the Chaudiere. If the second proposal were carried out, then, as regards navigation, the river would remain as it now stands. I am not prepared, for the want of information—information to be obtained only after a most thorough and careful examination of the river from the Mountain Rapids to Ottawa, the cost of which would be not less than $5,000—to offer an opinion as to the feasibility of the scheme for making Lake Temiscamingue reservoir for feeding the Ottawa during the periods of low water ; neither can I estimate the cost of a dam at the Mountain Rapids, and its probable effects on the country at the foot of Lake Temiscamingue, without further and extended examination. Either of these projects would involve an expenditure, ranging from $250,000 to $500,000 ; for, as I believe it would be unwise to construct the works of wood, or any perishable material, they should be built, if built at all, in a most solid and enduring manner so as to ensure their permanence and a minimum cost for annual repairs."

It is expected that next season all the mills hereabouts, will be lighted with the electric light. Messrs. Bronson and Weston, and Messrs. Perley and Pattee are at present having the necessary apparatus put in their mills.

Mr. E. B. Eddy, the lumber king of Hull, was a few days ago elected Mayor of that city.

Mr. W. G. Perley, of the firm of Perley & Pattee, is at present in England, and has been there for a number of months. He is one of the principal directors of the Canada Atlantic Railway Co.

WINNIPEG.

The Winnipeg *Commercial* of Jan. 23, says : There is very little demand at present, nor is there likely to be any of much account until the revival of building operations in the spring. Quotations are as follows :

Pine lumber, 1st, common boards, dressed	$26 50
do, 2nd, dressed	25 50
do, 1st dressed roungh	26 50
do, 2nd do.	25 50
Sheating, rough	25 00
Timber 16 feet and under	24 00
do. over 16 feet, for each additional 2 feet	1 00
Dimension and joists 16 feet and under	24 00
do. do, over 16 feet for each	1 00
Fencing	25 00
2 and 3 in. battens	30 00
A. stock boards, all widths	50 00
B. do. do.	45 00
C. do. do.	40 00
D. do. do.	35 00
1st clear, 1, 1½, 1½, and 2 inch	60 00
2nd do. do. do.	56 00
Window and door casings	50 00
Base boards, dressed	50 00
1st pine flooring, siding and ceiling	40 00
2nd do. do. do.	35 00
3rd do. do. do.	30 00
½ inch split siding, dressed	30 00
Spruce lumber—timber 16 feet and under	22 00
do. over 16 feet for each additional 2 feet	1 00
Dimension and joists, 16 feet and under	23 00
do do. over 16 feet, for each additional 2 feet	1 00
Boards	22 00
1st flooring, siding and ceiling	28 00
XX shingles	5 25
Star A shingles	5 25
X shingles	5 00
A. do.	4 50
Lath	4 50

ALBANY.

Quotations at the yards are as follows :—

Pine, clear, ℔ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	45 00@50 00
Pine, good box	22 00@33 00
Pine, 10-in. plank, each	00 42@00 46
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in.	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 21
Pine, 10-in. boards, 16 ft., ℔ M	28 00@32 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	18 00@20 00
Pine, 1-in. siding, select	43 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1½-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@35 00
Cherry, common, ℔ M	25 00@35 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	38 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 4 90
" clear, "	0 00@ 3 30
" cedar, mixed	0 00@ 3 50
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ℔ M	0 00@ 2 75
Lath, spruce, "	0 00@ 3 00

CHICAGO.

The *Northwestern Lumberman* says :—While business has been quite dull for the past week there is a slight improvement noticeable in the demand, and sales have been a trifle better than they were the preceding week, although as yet the improvement has not become altogether general, nor have the sales been large. With a very few exceptions the dealers report an increased demand from the country for estimates on bills, together with a few sales that denote the trade is not dead, and seem to promise a good business as soon as the weather grows milder. Dealers whose trade lies in the southern part of this state and in the south expect to have trade pick up within two or three weeks, when it will gradually creep northward as warm weather becomes general. All of the dealers

are exceedingly hopeful, and none of them will sell any bills at a sacrifice in order to reduce stock. Although business is very dull, buyers only taking what they absolutely need, there is an improvement in the western enquiry, especially in Kansas and Nebraska. Shipments are gradually growing larger. Still, the dullness in trade does not seem to affect prices. There is not severe cutting reported, and sellers don't appear to be at all anxious to force sales.

While the lumber business is always slow at this season of the year, this has been particularly the case this year, and the volume of business thus far this year has been fully one-third less than for the same period last year. That the market has not become demoralized and gone to pieces under the dull trade is by some dealers attributed to the fact that mill men carry over so many logs. In former years it was the habit to run day and night to cut up all the logs they could get, but of late they have preferred to carry over a portion of their logs rather than cut every thing and glut the market. Another element that tends to stiffen the market in spite of the low volume of business is the general belief that the balance of the winter will be a favorable one for dealers.

Receipts of lumber, shingles, etc., for the week ending Jan. 24, as reported by the Lumberman's Exchange:—

	RECEIPTS.	
	Lumber.	*Shingles.*
1884	4,836,000	472,000
1883	3,181,000	786,000

FROM JANUARY 1, 1884, TO JANUARY 24, 1884, INCLUSIVE,

	RECEIPTS.	
	Lumber.	*Shingles.*
1884	9,014,000	1,454,000
1883	11,790,000	4,420,000
Increase		
Decrease	2,776,000	2,996,000

STOCK ON HAND JAN. 1.

	1884.	1883.	1882.
Lumber	635,348,561	655,013,520	560,416,842
Shingles	461,930,496	299,946,350	260,906,494
Lath	65,933,140	76,361,002	48,820,438
Pickets	1,529,287	3,093,990	3,784,178
Cedar posts	397,832	78,034	219,012

BOSTON.

Cotton, Wool and Iron of Jan. 26, says:—There has nothing developed to change the character of our previous report. The demand for all kinds is of a quiet and conservative nature at this between season period. At the same time, the prevailing tone is steady, with a fair prospect for the coming season. Quotations are for car-load lots.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

OSWEGO, N. Y.

From Our Own Correspondent.

The demand for lumber has been very quiet since our last report. There is no change in quotations; stocks are in excess of any year past, and the assortment is good; dealers are firm on prices and collections are well kept up. The margins have been very close the past year and not much money made.

Three uppers	$45 00@46 00
Pickings	35 00@36 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	11 00@15 00
Mill run lots	15 00@20 00
Sidings, selected, 1 inch	30 00@35 00
1½ inch	30 00@36 00
Mill run, 1x10, 12 inch	18 00@20 00
selected	22 00@26 00
Shippers	14 00@17 00
Strips, 1 and 1½ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	22 00@35 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 25@ 3 50
Lath	2 00@ 2 20

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

LONDON.

The *Timber Trades Journal* of Jan. 12, says: There is no further movement in the trade here to chronicle, and the same state of quietude to which we have now got so accustomed still pervades the market. The foriegn houses have not as far as we can learn, made up their minds what the free-on-board prices are to be for the forthcoming season, and those we have consulted on this side in relation to this important question appear to think it will be some time yet before quotations are on the market, though we can hardly see how they can be much longer delayed. We gave our ideas of what the opening values for leading stocks will range at, and which, we think, will be found very near the mark. Anyway there is hardly any question but that the prices demanded this year for first open water will be under rather than over those put in the hands of buyers a year ago.

Messrs. Foy, Morgan, & Co., had a capital attendance at their sale on Wednesday, most of the London trade being present, and many provincial firms being represented also. The latter do not always figure as buyers, but their presence shows that the proceedings are not such a matter of indifference to them now as they used at one time to give out. The ties of sympathy between the prices at the Baltic salerooms and those of the outports are much closer now than they used to be ere steamers figured in the broker's freight lists.

Yellow pine appeared to be in request, but the lots offered were mostly short lengths. Spruce seemed in better odour, 3rd quality Rimouski going from £7 10s. to £8. By the time the flooring portion of the catalogue had been reached the room had thinned off considerably and bids were not so readily forthcoming; hence it was twenty minutes to four ere the last lot was knocked down.

LIVERPOOL.

The *Timber Trades Journal* of Jan. 12, says: There is little animation displayed in the market this week, and sales for the fulfilment of country orders have been somewhat restricted.

This is no matter of surprise, looking at the general unsatisfactory condition of trade, and especially so in this district, where the strikes in the northern parts of the country are in some degree interfering with the customary course of business. But, on the other hand, we have a moderate amount of building in progress, which has not been materially interfered with by the state of the weather so far, and these operations will tend to keep the trade moving.

The import of timber continues small, and with a continuance of the present mild weather there should be no impediment to the prosecution of building operations, and this should cause a steady drain upon the market for all building materials.

On Wednesday Messrs. Farnworth & Jardine offered a parcel of Bangkok teak planks for sale, but failed to elicit a bid for them, and afterwards Messrs. Alfred Dobell & Co. offered the cargo per Glen Grant, from Apalachicola, consisting of about 39,000 cubic feet of hewn timber and 1,435 feet of sawn planks. The cargo sold fairly well upon its merits, and was almost entirely taken by the local trade.

SUNDERLAND.

The *Timber Trades Journal* of Jan. 12, says: The holidays have at last passed, and business will again run in its old groove. The present mild weather enables outdoor work of all kinds to be pushed, and in the building trade unusual activity is shown.

Importations during the week are only poor, viz., a steamer from Fredrikshald with 600 loads props, for Rayner & Moller, and a cargo of oak timber, 250 loads, from Stettin for Short Bros. A Quebec cargo of 600 loads oak, elm, ash, white and red pine timber, and a quantity of deals, arrived during the New Year holidays, and only commenced discharging on Tuesday last. The cargo is for market, and as part of it is going into crafts for Hartlepool, we presume the Liverpool house, who have the matter in hand, are dividing the cargo.

GLASGOW.

The *Timber Trades Journal* of Jan. 12, says: There have been few arrivals of wood goods at Clyde ports during the past week—say altogether about 2,000 loads. Business has hardly yet resumed its ordinary flow since the New Year holidays. There are no public sales to report at this time, but two are announced to take place here next week, results of which will be duly forwarded. The wages question has been settled in a conciliatory spirit in the shipbuilding yards in the upper reaches of the river, but at Dunbarton several hundred men are thrown idle, the laborers in a shipyard there having resisted the reduction of ten per cent., the ironworks remaining also at a standstill. In the steel trade, also, the masters seem bent on adhering to the proposed reduction. Questions affecting the prosperity of Clyde shipbuilding are, of course, of great interest to the timber trade here, which has in that industry its most important interests.



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TIMBER FOR RAILWAYS.

When the charter of the Northern Pacific railroad was granted, the company was given the privilege of cutting such timber as was needed in construction on lands "adjacent" to the line. As the work progressed through timberless regions, the contractors, under the color of this tree cutting privilege, in some instances went 100 miles away from the line to obtain timber, construing the word "adjacent" to mean anywhere on Uncle Sam's domain that timber was to be found that could be rafted to the railroad. There has been some kicking against this free range of the forests in eastern Washington, and, through the instigation of local interests, probably, the United States began suit against the company for the recovery of $70,000 stumpage value in Yakima county. The case was tried before Judge Hoyt, of the second judicial district, at Olympia. The decision of the court was in favor of the defendant company. The text of the decision recited that the word "adjacent" had a broader sense than the word "adjoining," and could be stretched, like the elastic skin of the man at the dime museum, to cover even a hundred miles. If this decision holds in the higher courts, it follows that lands adjacent to a land grant railroad company may cover unlimited territory.—*Northwestern Lumberman.*

ST. JOHN LUMBER EXPORT.

The *Monetary Times* says:—As has already been stated, the prospect for the lumber trade is not favorable, and one may be prepared to hear of operations upon a reduced scale everywhere. At St. John we are told there is held over about 35,000,000 feet, while last year the stock there amounted to about 58,000,000 feet. Throughout New Brunswick the stock is about two-thirds of what it was in January, 1883. A reduction of fully forty-five per cent. has been made, too, in the lumbering operations there this season. In the year 1883 St. John shipped to Europe, Africa, and Australia 181,518,132 superficial feet of deals and ends, a large quantity, but, says the *Telegraph*, considerably below every year in the last ten years, excepting 1875 and 1879. The shipments during the first three quarters of the year were heavy, but since the unfavorable turn in the wood market in England they have been largely reduced.

The following statement shows the quantity exported and the ports to which the cargoes were sent:—

Ports.		*Vessels. No.*	*Tons.*	*Deals, etc. S. Ft.*
Africa,	1883	10	5,649	5,349,725
do.	1882	2	2,078	1,991,116
Australia,	1883	2	2,333	1,877,974
do.	1882	3	3,404	1,969,060
Barrow	1883	4	2,893	2,645,980
do.	1882	10	8,967	7,891,134
Bristol Ch.	1883	35	26,676	25,292,085
do.	1882	46	32,864	31,348,063
Continent	1883	27	19,723	18,321,454
do.	1882	26	18,646	16,784,469
Ireland	1883	91	45,900	48,479,995
do.	1882	76	42,362	39,223,422
Liverpool	1883	74	81,061	67,713,949
do.	1882	94	102,086	84,542,341
London	1883	6	6,891	5,329,409
do.	1882	8	6,820	5,495,158
Scotland	1883	8	7,393	6,799,286
do.	1882	8	7,635	6,568,712
Wales	1883	8	3,481	1,848,803
do.	1882	4	2,006	621,087
Total	1883	270	205,311	181,518,132
do,	1882	244	231,379	201,413,217

Ten cargoes were sent to Africa, where two only were sent in 1882, and none in 1881 or 1880. Liverpool, of course, continues to be the centre of the trade—67,000,000 feet being sent there.

The chief shipper of sawn woods continues to be Gibson, of Nashwaak, whose shipments, though 10,000,000 feet less than in 1882, were 19,000,000 feet more than in 1881, and 24,000,000 feet more than in 1880. He despatched 118 vessels, of 105,491 tons. Other large shippers were R. A. & J. Stewart, W. M. MacKay, Guy, Bevan & Co., S. Schofield, Clinch & Sons, Knight & Co.

The square timber trade of that port shows figures rather ahead of the previous year, 3,883 tons of pine and 11,950 tons of birch having been exported, compared with 3,332 tons of pine and 7,576 tons of birch in 1882. As exporters in this department of trade, the names of Scammell Bros. and McLachlan & Wilson require to be added to those mentioned above. The square goods all went to the United Kingdom except 159 tons birch to the Continent of Europe. We take some extracts from a statement given of the shipments from St. John for the last thirty years:—

Year.	*Tonnage.*	*Deals, etc. S. feet.*	*Pine. Tons.*	*Birch Tons*
1854	256,402	143,190,392	71,226	8,483
1855	225,521	123,684,587	77,441	10,876
1860	211,794	146,376,091	29,422	9,009
1865	209,562	159,637,724	17,294	9,437
1870	183,629	148,971,221	3,472	7,095
1875	202,813	171,137,264	748	6,958
1877	252,111	215,173,920	1,191	13,043
1880	253,658	210,012,240	2,884	16,832
1881	235,785	210,281,730	1,549	5,156
1882	331,370	201,413,717	3,332	7,576
1883	205,311	181,815,132	3,383	11,950

The *Telegraph* also gives the shipments from the principal ports of the Province of New Brunswick:—

SHEDIAC.

Year.	*Vessels. No.*	*Tons.*	*Deals. S. feet.*
1882	31	13,155	12,495,000
1883	23	10,369	9,624,000

BATHURST.

Year.	*Vessels. No.*	*Tons.*	*Deals. S. feet.*
1882	33	20,242	17,412,806
1883	53	27,483	23,415,607

BAY VERTE.

Year.	*Vessels. No.*	*Tons.*	*Deals. S. feet.*
1882	10	3,623	4,030,000
1883	3	1,379	1,350,000

DALHOUSIE.
(including outport of Campbellton.)

Year.	*Vessels. No.*	*Tons.*	*Deals. S. feet.*
1882	38	20,687	15,552,566
1883	44	26,847	18,726,737

MIRAMICHI.

	S. feet deals.
1882	117,206,935
1883	148,563,030

BICHIBUCTO.
(Including ont ports of Buctouche and Cocaigne.)

	S. feet Deals.
1882	13,829,650
1883	21,090,150

"The total shipment of deals from all the ports given above amounted in 1883 to 401,287,676 superficial feet, compared with 381,990,174 feet in 1882. The shipments from the ports from which we have no returns would not alter these figures very much, and our statement shows pretty nearly the total deal shipments from New Brunswick."

NEW BRUNSWICK.

For several years past there appears to have been a gradual falling off in the deal shipment of New Brunswick. The pine timber trade has declined to next to nothing although the exports of birch timber slightly increased during the past year. The export of pine from the port of St. John has fallen from 77,441 tons in 1865 to 3,883 tons in 1883, while in 1875 it only amounted to 748 tons. The shipment of birch timber, although showing a small increase over 1882, was light, the total shipment only reaching 11,950 tons last year against 7,576 tons in 1881. The smallest shipment of deals made during the past thirty years was in 1858 when only 123,638,368 feet were exported, while the largest shipment made during that period was in 1877 when it reached 215,183,920 feet. Although the greater part of the deal and timber exports of New Brunswick goes to Europe, over 7,000,000 feet of deals were shipped to Australia and Africa from St. John last year. There appears to be a large decrease in the quantity of deals being carried over at the latter port this winter as compared with last year; the figures being 58,000,000 feet held over during the winter of 1882 against 35,000,000 at present held. The total shipment of deals from the province during last year, from all parts, will probably reach 410,000,000 against 385,000,000 feet exported during 1882.

FOR A HARD COLD, with pain in the head, bones or through the chest, take Down's Elixir at once and in liberal doses, cover up well in bed, an hour we'd for it, you will soon be well.

TIMELY AID.—A little daughter of the Captain of the Steamer "Empress of India" was suddenly ill with Croup while at a friend's house in Toronto. No medical aid being handy, recourse was had to Hagyard's Yellow Oil; this popular household remedy offorded prompt relief and the little girl was as lively as ever in a few hours.



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File Manufacturers
ETC.,
150 FRONT STREET EAST
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FILES FOR SALE. FILES RE-CUT

F. E. DIXON & CO.
MANUFACTURERS OF
STAR RIVET
LEATHER BELTING
70 King Street East, Toronto.

SPECIALTY:—Belting made from J. B. HOYT & Co's American Oak Tanned Leather. Send for Price List and Discounts.

EAGLE FOUNDRY!
GEORGE BRUSH
14 to 34 King and Queen Sts, MONTREAL,
MAKER OF
Steam Engines, Steam Boilers, Hoisting Engines, Steam Pumps,
CIRCULAR SAW MILLS, BARK MILLS, SHINGLE MILLS,
Water Wheels, Mill Gearing, Shafting, Hangers and Pullies,
Hand and Power Hoists for Warehouses &c., &c.
Also, Sole Manufacturer of BLAKE'S CHALLENGE STONE BREAKER.
AND AGENT FOR 1yL21
"Water's" Perfect Steam Engine Governor, and "Heald & Sisco's" Centrifugal Pumps

EXTRA HEAVY AMERICAN
Oak Tanned Leather Belting.
RUBBER BELTING, RUBBER PACKING, RUBBER HOSE,
LINEN HOSE and COTTON HOSE.
A Full and Complete Stock always kept on hand. WRITE FOR PRICES and DISCOUNTS.

We have the Largest and best equipped RUBBER FACTORY in the world for the manufacture of VULCANIZED INDIA RUBBER GOODS for Mechanical Purposes.

Our trade here has increased to such an enormous extent that in order to keep up with the demands, we have purchased from Major John Gray, M.P.P., Parkdale, the plot of ground situated on West Lodge Avenue, adjoining the Credit Valley, Toronto, Grey and Bruce, Northern and Grand Trunk Railways, for the erection thereon of a BRANCH RUBBER FACTORY, works to be in full operation January 1st, 1884.

THE GUTTA PERCHA AND RUBBER MANUFACTURING CO.
T. McILROY JR.
WAREHOUSE:—10 and 12 King Street East,
P.O. BOX 556. 1L6m TORONTO.

The Improved CLIMAX Sash Lock

MANUFACTURED BY MILLER BROS., GUELPH.

Holds the Sash in any position so that it cannot be moved either up or down, can be put on by anyone, only requiring two screws.

1y AGENTS FOR CANADA:— L21

RAE & WATSON, 22 Church Street, TORONTO, Ont.

HUGH GIBSON,

MANUFACTURER OF

KNIGHT'S PATENT "EXCELSIOR"

SAW MILL DOGS



EXCELSIOR DOG.

The Sawyer's Favorite

For Holding Logs upon a Saw Mill Carriage while being Sawed into Lumber.

MISSISSIPPI, June 7th, 1883.

HUGH GIBSON, ESQ.,—Your Patent Excelsior Mill Dogs give entire satisfaction, and is certainly up to your recommendation. They are the best Mill Dog in the market. I am very much pleased with them.

Yours Respectfully,
PETER McLARREN.

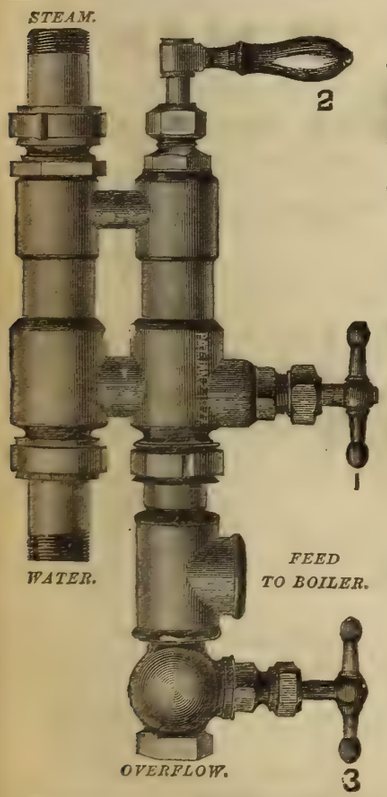
BERKLEY, April 20th, 1883.

HUGH GIBSON,—SIR,—The Dogs I bought of you give satisfaction. They beat any Dog that I ever saw for ripping or edging lumber on carriages. They are just the thing for scantling. I would not take $50 for them to-day and have to wait for another pair to come from you, because I believe they make two dollars a day for me.

Yours truly,
GEO. S. BROWN, JR.

2t1y

Manufactured by HUGH GIBSON, CHATHAM.



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Hancock Inspirator

The Best Feeder known for Stationary, Marine or Locomotive Boilers.

THE INJECTOR PERFECTED!

All Sizes lift water 25 feet. No adjustment required for varying Steam Pressures.

Over 50,000 Now in Use.

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MONTREAL, P.Q., CANADA.

Manufacturers of Inspirators, Ejectors, and General Jet Apparatus.

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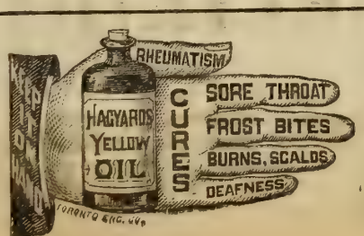
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Building & Bridge Timber Sawn to Order.

Pine, Spruce and Hemlock Lumber by the Cargo.

Steam Saw Mills, Box Factory and Yards.—342 to 390 William St., and 120 St. Constant St., Montreal. Steam Saw Mills, L'Assomption, P.Q.

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MOCOCK & SON

St. Gabriel Locks, - Montreal,

—MANUFACTURERS OF—

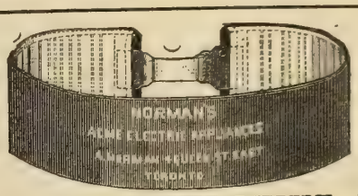
AXES and EDGE TOOLS

OF EVERY DESCRIPTION.

Old and Reliable, the Best Axes made in Canada.

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Established 1874.



Established 1874.

NORMAN'S ELECTRO CURATIVE APPLIANCES

RELEIVE AND CURE

Spinal Complaints, General and Nervous Debility, Nervousness, Rheumatism, Gout, Liver, Kidney, Lung, Throat and Chest Complaints, Neuralgia, Bronchitis, Incipient Paralysis, Asthma, Sciatica, Sprains, Consumption, Sleeplessness, Colds and Indigestion.

Ask for NORMAN'S ELECTRIC BELTS and you will be safe against imposition, for they will do their work well and are cheap at any price.

A. NORMAN, ESQ.—Dear Sir,—Please send me a waist belt. Enclosed find price. Head band I got for my wife has almost cured her of neuralgia. Yours truly,
C. L. TILLEY, WATERVILLE, N.B.

Numerous of such testimonials can be seen at my office, proving that they are doing a good work and worthy the attention of all sufferers. Circulars free. No charge for consultation.

A. NORMAN, 4 Queen Street East, Toronto.

NORMAN'S ELECTRO CURATIVE TRUSS is the best in the world. Guaranteed to hold and be comfortable. Circular free. N.B.—Trusses for Rupture, best in America, and Electric Batteries always on hand at reasonable prices.



THE TRADE

Will always find a Large Stock of

SHANTY BLANKETS

In every Size and Weight, and

HORSE BLANKETS

AT LOWEST MILL PRICES.

JOHN MACDONALD & Co.

TORONTO.

A Magnificent Line of All Wool Fawn Blankets.

SAMPLE ORDER WILL HAVE OUR BEST ATTENTION. 2t4

FATE OF FIVE LUMBERMEN.

Two years ago, says a Corning despatch, five young men came from the woods of Maine, where they followed the occupation of choppers, and found employment in the lumber regions of Pennsylvania, in the vicinity of Malley's mills. They were George and William Jennings, brothers; Arthur Fraley, Andrew Shalcross, and Hiram Stephens. The first week they were in the region George Jennings was "snaking" logs to a roll way. As he was engaged in fastening a chain around a large log, standing on the lower side of it as it lay on the top a small hill it was started in some manner, and before he could get out of the way it knocked him down and rolling over him,

CRUSHED HIM TO DEATH.

His father had been killed in a similar manner in Maine. A few months afterwards, Arthur Fraley and William Jennings were hunting in the woods near Malley's mills. They had shot a deer, and after loading their guns, had walked up to where the deer lay. Fraley stooped down beside the deer and Jennings stood behind him. While they were in these positions Jennings saw a fawn come leaping along the edge of the ridge close by them. He quickly cocked his gun. The click of the hammer caused Fraley to look up. Seeing the fawn he rose quickly to his feet. Jennings gun was discharged at the same instant, and the ball passed clear through Fraley's head killing him instantly. A few weeks later Jennings was engaged with others in driving logs, and while he was breaking a jam the jam gave way unexpectedly, and he was carried down with it and crushed to death. After William Jenning's death Andrew Shalcross declared that he could not remain in such an apparently fatal spot and he obtained work in Potter County. Last week the news was received that he had been killed by a falling tree. Hiram Stephens was now

THE ONLY ONE ALIVE

of the five young lumbermen who had come together to Pennsylvania. He had remained at Malley's mills. Last week when he heard of Shalcross' death he resolved to return to Maine. He had agreed to work at the mills until the 1st of February, and as his employer would not release him before that time he made his arrangements to go when the time expired. Two weeks ago a young man named George Gough went to Malley's mills to work as a teamster. On Monday last there was but little for the teams to do, and as one of the choppers was sick Gough was sent to the woods to chop. He and Hiram Stephens went together. They were to work on a job about three miles from the mills. Gough was a green hand at chopping, and until about three o'clock in the afternoon had simply trimmed the branches from the trees that Stephens felled. Stephens had just felled a tree, and suggested to Gough that he try his hand at one. Gough selected a medium sized tree near by and began chopping. Stephens proceeded to trim the one that he had felled, and paid no attention to Gough's work. After a while he heard Gough shout to him to run, as the tree would fall in such a way as to strike him with a branch. Stephens started carrying his axe in front of him. He had taken but a few steps when he stumbled and fell. Gough was giving the last strokes on the tree with his axe, and seeing that Stephens did not rise after falling he ran to his aid, forgetting the danger from the tree. Before he reached Stephens

THE TREE FELL WITH A CRASH,

and Gough was caught beneath the very branch against which he had warned his companion. He was pinned on his back to the ground, the limb lying across his legs. No part of the tree touched Stephens, although Gough did not lie six feet from him. When the tree fell Stephens raised his head and saw Gough lying beneath the branch. He rose to his feet and then Gough saw the blood was pouring in a great stream from a fearful wound in Stephens' stomach. He had fallen on the upturned blade of his keen axe. Stephens staggered towards his companion, and, although it was evident that he was dying, began chopping at the limb with the intention of releasing Gough if possible. He gave a few feeble and random blows, and then, turning to Gough, he laid the axe within his reach, and said:

"I'm done for George! You'll have to cut yourself out."

He then staggered off a few feet and fell to the ground dead. After long and difficult labor Gough succeeded in cutting the limb in two with Stephens' axe and in pushing off his leg that portion of it that held him fast. Then for the first time he knew that one of his legs was broken. There is a cabin, occupied at night by a number of choppers, about a mile from where Gough lay, and as night was coming on and little hope of any one passing that way, and none that he could survive a night spent prostrate on the snow, he determined to drag himself through the woods to the cabin. When the choppers came into the cabin about six o'clock they found Gough lying unconscious on the floor. His fingers were torn and bleeding and his clothes torn. Such restoratives as were at hand served to revive Gough, and he was soon enabled to tell of his terrible experiences of the afternoon, and the aweful fate of young Stephens. Gough's fingers were torn to the bone by clutching in the snow and on bushes to drag himself along to the cabin. He was taken at once to Malley's mills, and he will doubtless recover. Stephens' dead body was found by a party of choppers who went in search of it, and will be buried at Malley's mills.

On Thirty Days Trial.

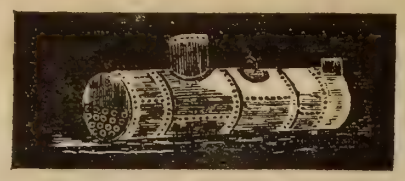
The Voltaic Belt Co., Marshall, Mich., will send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N. B.—No risk is incurred, as thirty days' trial is allowed.

AN IMPORTANT INQUIRY.—Are you threatened with Consumption? If so, the cause may be in the blood. Impure blood and Scrofula are close companions, and Scrofula and Consumption are still closer related. Burdock Blood Bitters cure all forms of Scrofula by cleansing the blood and regulating the secretions.

LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on Dec. 31st, 1882 and 1883, and also the Consumption for the month of Dec. 1882 and 1883:—

	Stock, Dec. 31st. 1882.	*Stock, Dec. 31st. 1883.*	*Consumption for the month of Dec., 1882.*	*Consumption for the month of Dec., 1883.*
Quebec Square Pine	292,000 ft.	459,000 ft.	190,000 ft.	256,000 ft.
" Waney Board	275,000 "	349,000 "		
St. John Pine	51,000 "	30,000 "	20,000 "	24,000 "
Other Ports Pine	66,000 "	90,000 "	0,000 "	4,000 "
Red Pine	65,000 "	60,000 "	3,000 "	4,000 "
Pitch Pine, hewn	629,000 "	305,000 "	89,000 "	54,000 "
" Sawn	606,000 "	530,000 "	85,000 "	123,000 "
Planks	00,000 "	000,000 "	00,000 "	00,000 "
Dantzic, &c., Fir	59,000 "	135,000 "	11,000 "	10,000 "
Sweden and Norway Fir	21,000 "	81,000 "	00,000 "	29,000
Oak, Canadian and American	335,000 "	330,000 "	46,000 "	44,000 "
" Planks	104,000 "	182,000 "	84,000 "	84,000 "
" Baltic	40,000 "	13,000 "	3,000 "	8,000 "
Elm	51,000 "	22,000 "	13,000 "	4,000 "
Ash	13,000 "	24,000 "	5,000 "	4,000 "
Birch	102,000 "	91,000 "	53,000 "	63,000 "
East India Teak	13,000 "	49,000 "	7,000 "	9,000 "
Greenheart	132,000 "	109,000 "	6,000 "	3,000 "
N. B. & N. S. Spruce Deals	21,884 stds.	22,626 stds.	6,002 stds.	5,581 stds
" Pine "	830 "	1,375 "		
Quebec Pine & Spruce Deals	8,482 "	8,459 "	1,343 "	2,079 "
Baltic Red Deals, &c.	494 "	5,005 "	501 "	200 "
Baltic Boards	4,400 "	105 "	168 "	158 "
" prepared Flooring	2,861 "	3,961 "	592 "	121 "



(*ESTABLISHED 1852.*)

CURRIE BOILER WORKS

MANUFACTURERS OF

Steam Boilers

NEW and SECOND HAND ENGINES

and other Machinery on hand and for Sale.

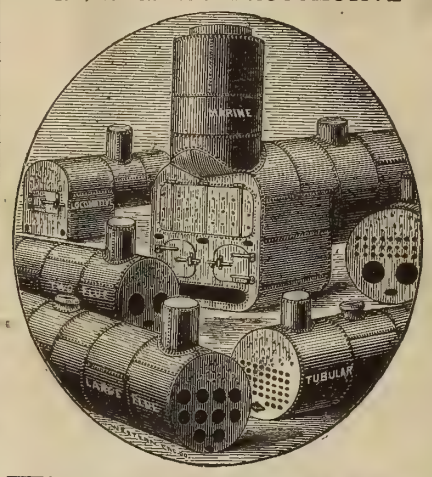
CURRIE, MARTIN & Co.

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JOHN McGREGOR & SONS

Manufacturers of all kinds of STATIONARY, MARINE and LOCOMOTIVE



BOILERS

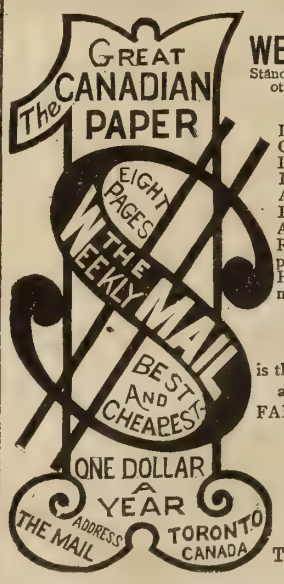
And SHEET IRON WORK.

SECOND-HAND MACHINERY Bought, Sold or taken in exchange for new work. REPAIRS PROMPTLY ATTENDED TO. All Boilers Tested by cold water pressure to 150 pounds to the square inch.

DOCK and WORKS:—

Sandwich Street, Windsor, Ont.

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Stands far in advance of any other CanadianPaper.

$1 a year

It has the Largest Circulation; the Latest News, both Local and Foreign. A Splendid Story Page. First-class Agricultural Page. Reliable Market Reports. Legal Column Household Department, Children's Department, etc.

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is the great medium for advertisements of FARMS FOR SALE

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VEGETABLE BALSAMIC

ELIXIR

Has stood the test for FIFTY-THREE YEARS, and has proved itself the best remedy known for the cure of

Consumption, Coughs, Colds, Whooping Cough and all Lung Diseases in young or old. SOLD EVERYWHERE.

Price 25c. and $1.00 per Bottle.

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J. T. LAMBERT,

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ORDERS FOR DIMENSIONS AND ALL OTHER KINDS AND GRADES OF

American Lumber

PROMPTLY ATTENDED TO.

Timber Limits and the Square Timber Trade a Specialty.

Office, Wellington Street, OTTAWA. 1Ltf

Burdock BLOOD BITTERS.

WILL CURE OR RELIEVE.

BILIOUSNESS, DIZZINESS,
DYSPEPSIA, DROPSY,
INDIGESTION, FLUTTERING
JAUNDICE, OF THE HEART,
ERYSIPELAS, ACIDITY OF
SALT RHEUM, THE STOMACH,
HEARTBURN, DRYNESS
HEADACHE, OF THE SKIN,

And every species of diseases arising from disordered LIVER, KIDNEYS, STOMACH, BOWELS OR BLOOD.

T. MILBURN & CO., Proprietors, Toronto.

A PRIZE. Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All, of either sex, from first hour. The broad road to fortune opens before the workers, absolutely sure. Address TRUE & Co, Augusta, Maine

A MAN

WHO IS UNACQUAINTED WITH THE GEOGRAPHY OF THIS COUNTRY WILL SEE BY EXAMINING THIS MAP THAT THE



CHICAGO, ROCK ISLAND & PACIFIC R'Y

By the central position of its line, connects the East and the West by the shortest route, and carries passengers, without change of cars, between Chicago and Kansas City, Council Bluffs, Leavenworth, Atchison, Minneapolis and St. Paul. It connects in Union Depots with all the principal lines of road between the Atlantic and the Pacific Oceans. Its equipment is unrivaled and magnificent, being composed of Most Comfortable and Beautiful Day Coaches, Magnificent Horton Reclining Chair Cars, Pullman's Prettiest Palace Sleeping Cars, and the Best Line of Dining Cars in the World. Three Trains between Chicago and Missouri River Points. Two Trains between Chicago and Minneapolis and St. Paul, via the Famous

"ALBERT LEA ROUTE."

A New and Direct Line, via Seneca and Kankakee, has recently been opened between Richmond, Norfolk, Newport News, Chattanooga, Atlanta, Augusta, Nashville, Louisville, Lexington, Cincinnati, Indianapolis and Lafayette, and Omaha, Minneapolis and St. Paul and intermediate points.

All Through Passengers Travel on Fast Express Trains.

Tickets for sale at all principal Ticket Offices in the United States and Canada.

Baggage checked through and rates of fare always as low as competitors that offer less advantages.

For detailed information, get the Maps and Folders of the

GREAT ROCK ISLAND ROUTE,

At your nearest Ticket Office, or address

R. R. CABLE, Vice-Pres. & Gen'l M'g'r. E. ST. JOHN, Gen'l Tkt. & Pass. Agt.

CHICAGO.

The William Hamilton Manufacturing Co'y

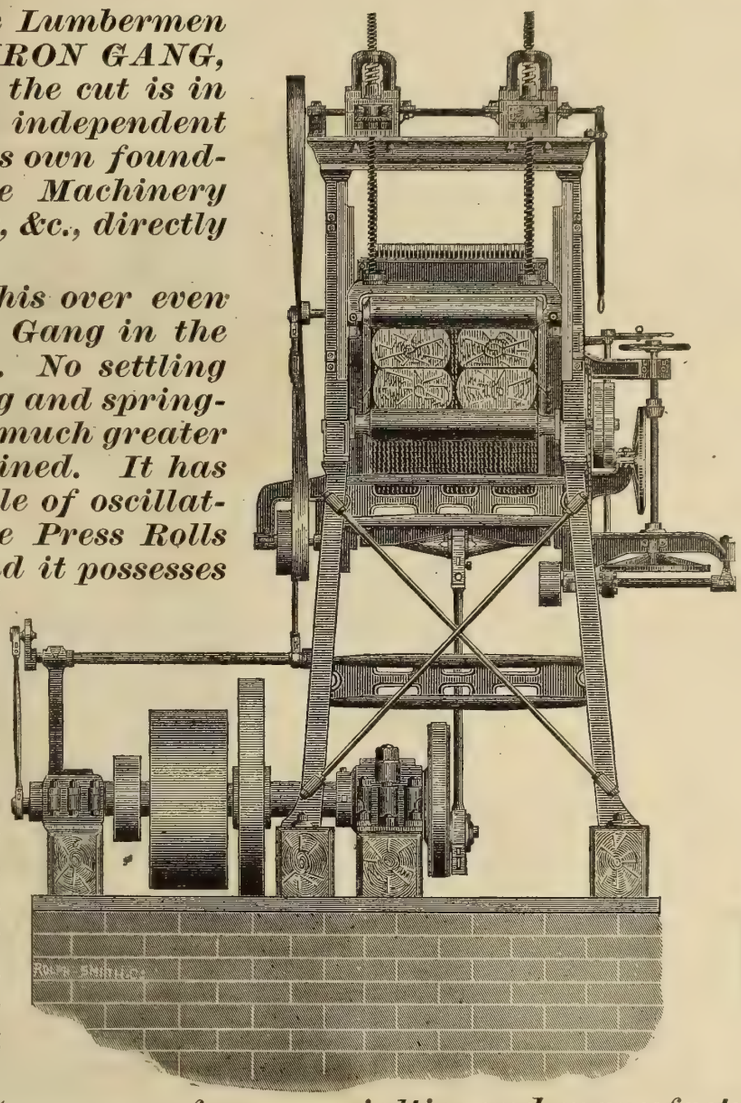
MANUFACTURERS OF (LIMITED,)

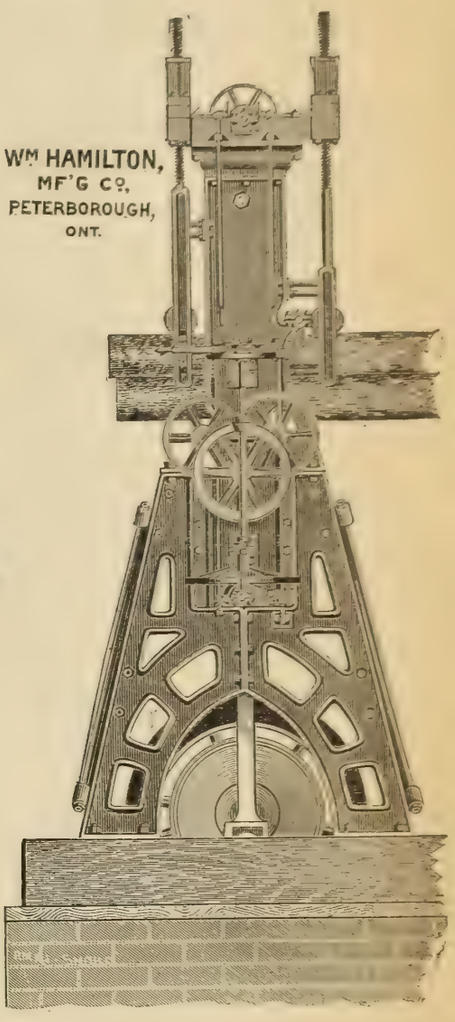
Saw Mills and General Machinery

PETERBOROUGH, - - - ONTARIO.

We introduce to the Lumbermen of Canada our New IRON GANG, which will be seen by the cut is in itself a complete and independent Machine, resting on its own foundations, having all the Machinery for operating, feeding, &c., directly attached.

The advantage of this over even a well built ordinary Gang in the mill frame is evident. No settling out of line, no yielding and springing of timber, while a much greater working speed is obtained. It has the most improved style of oscillating motion, it has the Press Rolls operated by power, and it possesses generally all the good features of best American Gangs, with heavier frame work and heavier shafting, all with a view to rapid, steady & correct working. A good look at one of these massive machines satisfies the sawmill man that they are in every way capable of continuously performing heavy duty throughout the season.

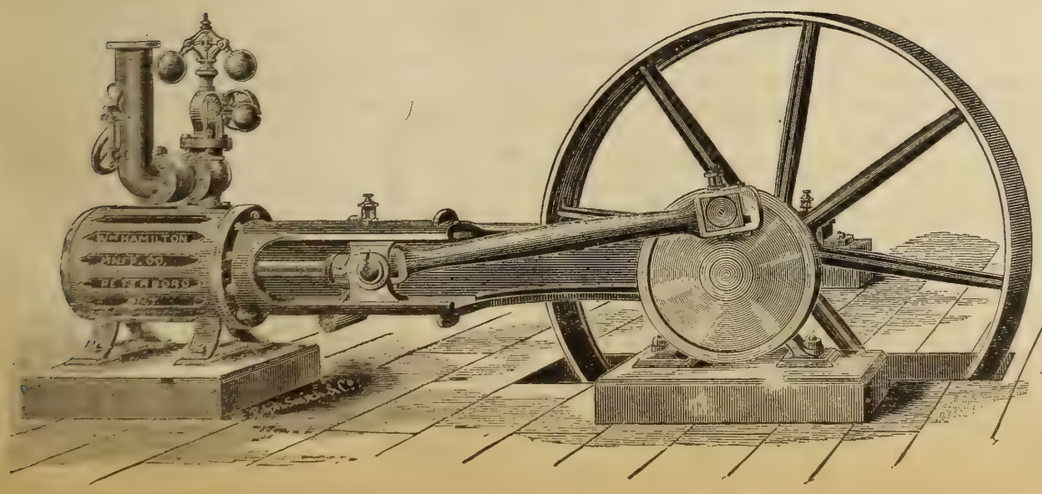




☞ *We make these Gangs one of our specialties and manufacture them of different sizes.*

—ALSO—

ENGINES AND BOILERS.



This cut represents our **SAW MILL ENGINE**, of which we make the following our Standard sizes, 12x16, 16x20, 18x24, and 24x30, built Strong and Substantial for Heavy Work. The Piston Rod, Cross-head Pin, and Wrist Pin, are made heavy and of the best steel; the Connecting Rod has solid ends and is tightened up by screw and wedge, avoiding all danger of keys getting out; the Slide Valve has a simple balance valve, requiring no attention from the Engineer, as it is self-adjusting. The Engine Shaft and Fly Wheel made very heavy. Belt Pulleys put on when required in place of Fly Wheel, and all regulated by the Judson Governor.

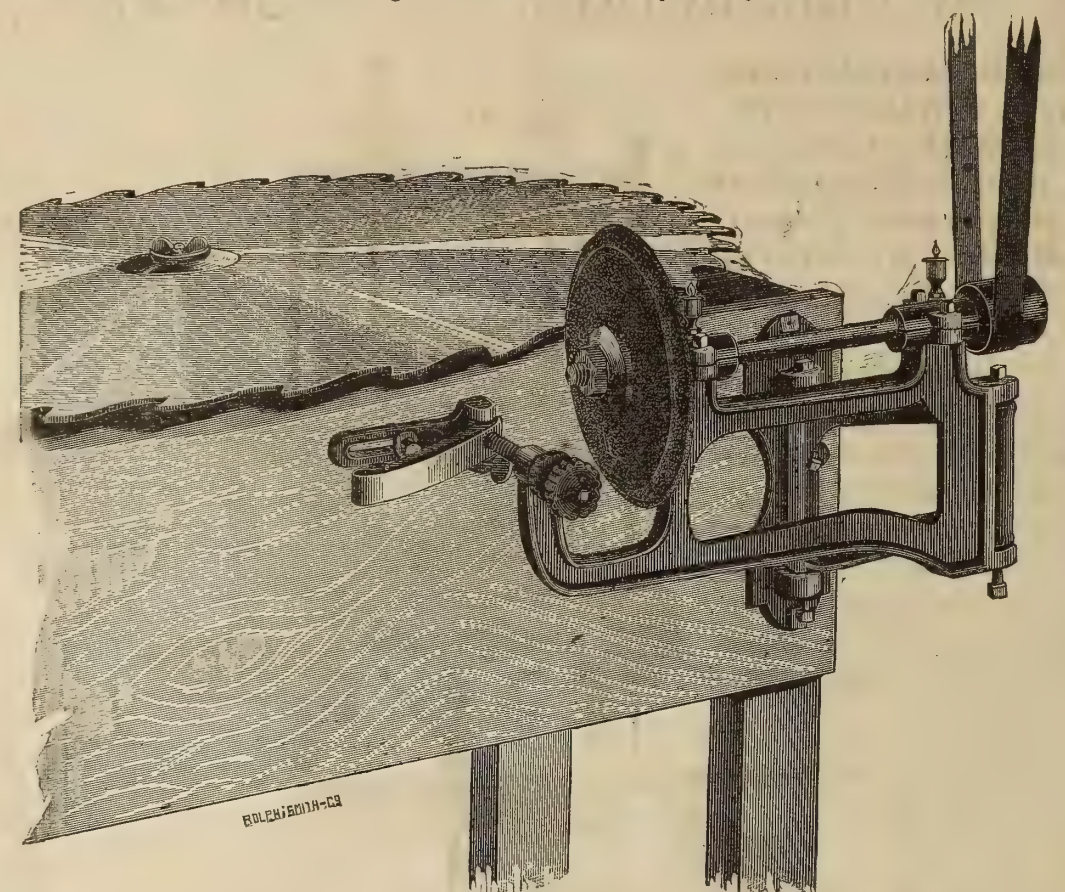
ROGERS' PATENT
SAW GUMMER and SHARPENER

The Handiest Machine for these purposes ever Invented.

Don't Heat!

Cheap!

Very Simple!



Accurate!

Works Fast!

Complete!

Lumbering Season, 1884

Saw Mill Owners in providing for the season of 1884, ought not to lose sight of ROGERS' SAW GUMMER for it will save them more money in proportion to the amount invested than any other machine.

Only $30, including Emery Wheel; Table and Countershaft, $10 extra.

A few of ROGERS' SAW GUMMERS were put on the market last season, and we quote some of the commendations received:

JAS. HADDEN, Foxmead, says:—
"Your machine is all I expected."

CHAS. ANDERSON, Anton Mills, says:—
"I have given it a good trial, and am well pleased with it. I find it is one of the indispensables in a saw mill." * *

ROBT. R. WEIR, Orillia, writes:—
"It works like a charm, and is very accurate in its work."

CRONE & PATTON, Hoc Roc Mills, Gravenhurst, says:
"The Rogers' Saw Gummer purchased from you gives "good satisfaction, * * it cannot be beat."

D. DAVIDSON, Pentanguishene, writes:—
"We are well pleased with the Gummer."

W. W. BELDING, Wyevale, writes:—
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LUMBERING IN MAINE.

Few states have a better variety of timber than Maine, and the inhabitants of no state use their timber to better advantage. The Maine lumbermen who own pine and spruce are the most conservative to be found. They long ago did away with promiscuous slashing, and cut such timber as would best answer their purpose, and carefully preserved the balance for future use. This is the reason why the Penobscot holds out so long as a logging stream. The end of the timber on that river has often been predicted, but the end has not come, nor will it for a long time yet. Once going over the ground does not answer the intentions of the lumbermen. They look upon their lands as permanent investment, and, as any investor should, they make the most of it. Outside of the manufacture of pine and spruce lumber, hundreds of wood-working establishments are busy, which utilize timber that, in the newer lumber states, would be considered of no account. The output of these establishments includes bean poles, fruit boxes, spool blocks, clothes pins, and numerous other small articles that the different industries call for. It is said by some that the manufacture of these things are peculiar to Yankees. It would be better if they were peculiar to some people who do not class themselves as such. They pay well and answer an imperative demand. It can be predicted that the wood-workers in the Northwest will follow the examples of the Manities, as that section shall become older. Actual accomplishments point in that direction. It was not long ago that pine lumber was all that was expected of the grand forests west of Lake Erie, but now more is expected of them. Furniture factories, hoop mills, and other manufacturing concerns outside of saw mills, are springing up to make use of the hard wood that is so abundant. These will increase, and as they do, factories which will turn out minor articles as do the Maine establishments will naturally follow.—*Northwestern Lumberman.*

AN ORGANIZATION.

The *Northwestern Lumberman* says:—In Pennsylvania there is an organization known as the Retail Lumber and Coal Dealers' Association of the North Pennsylvania Railroad and Adjoining District, having for its object the maintenance of uniform prices. When a dealer becomes a member, he must deposit his due bill for $25, and if at any time he is caught underselling his brother members, the due bill is collected, and the money goes into the association. This forfeiture tends to keep the members in the traces, and we understand it works admirably. This plan might be adopted with good results elsewhere. At several of the leading lumber markets there are associations and exchanges, and the main object of most of them is to establish prices. This they do regularly —on paper—but generally it goes no further. The dealers meet and discuss the importance of uniform prices, and while they are doing it no one would suspect that some of them have their sleeves packed with so many aces that they feel confident of winning the game. It would not be drawing on the imagination to say there are dealers who, at these meetings, advocate high prices on the published list, while all the time they expect to sell away under them, and thus convey to their customers that they are selling cheap. If they were obliged to deposit a few hundred dollars that would be forfieted in case they undersold the current list, they would cease to be the bulls they are in convention, and the bears they are out of it.

PRAISED BY THE PRAISED.

If *laudari a laudato*—to be praised by one who is praised—is, as is said, the highest possible eulogium, the following from the Bay City *Lumberman's Gazette* should warm the hearts of Canadian lumbermen:—

"Many people in this world are apt to imbibe the idea that something of which they are the possessor is the greatest of the kind in the world, and the people of cities are liable to form a similar impression in regard to manufacturing or other enterprises located within their midst. Bay City possesses two of the largest mills on the Saginaw river, and they are monsters in their capacity to masticate pine logs. Although they are mammoth institutions, and visited during the busy season by thousands at home and from abroad to witness their wonderful capacity they are far from being the largest institutions of their kind in the country. In a little village situated on the Grand Trunk railway in Canada, and at the head of the Bay of Quinte, bearing the name of the river at the mouth of which it stands, Trenton, is a saw mill owned and operated by Gilmour & Co., which exceeds in capacity and the number of men employed any mill on the Saginaw river, which stream turns out nearly a billion feet of lumber annually and even exceeded that amount in 1882. The Trenton mill alluded to cuts over 3,000 logs daily, produces over 350,000 feet of lumber, 100,000 lath, 100,000 pickets, besides heading and shingles, and the number of its employes is 600 men and boys. It stands in the small village alluded to a monarch without a rival."

ARTIFICIAL LUMBER.

In giving an account of the manufacture of artificial lumber, a New York man says the lumber is made principally of the pulp of wheat, rye and cut straw, and other vegetable fibers, combined with chemical ingredients and cements. It is formed of layers, about one-quarter of an inch in thickness, and these are pressed together with powerful machinery, and thus rendered as hard as the hardest wood, besides being much more dense. The boards are also rendered waterproof in varying degrees, according to the purpose for which they are to be used. The material is as durable as time and can be sold at a good profit for less than ordinary lumber. It will take any finish, and in this respect is equal to the finest hard wood. Moreover, it can be marbelized in imitation of any kind of marble, both in respect to a high degree of polish and exact imitation of grain. It will not warp and can be rendered perfectly water-proof if desired, thus making it suitable for the construction of burial caskets. It makes just as solid a surface as any wood, and may be made of the hardness of stone. As a substitute for wood in the construction of buildings it possesses qualities of perfect adaption. It will make the finest material in the world for roofing, not excepting slate or iron. It can be sawed, split or planed, and boards made of it are perfectly smooth and flat from end to end on both sides, without any knots, cracks or blemishes of any kind. He exhibited several articles of cabinet ware made from the material. Two of these were ordinary parlor tables, one of which resembled the peculiar mottled appearance seen in some choice hardwoods. The surface of the table was varnished and highly polished. The other table was finished in exact imitation of rosewood. A panel door was also shown the finish resembling mahogany. A couple of ladies' work boxes made after an elegant pattern and highly finished, were also exhibited.—*American Lumberman.*

LARGE TREES OF TURKESTAN.

A French traveller has recently measured mulberry trees at Ourgout and Salavad, in Turkestan, which measured more than 16 feet in circumference at five feet above the ground. Such large trees are generally found in religious places or overshadowing the retreat of some hermit. Plane trees have been measured which were of really wonderful size; one of these, in the village of Sairob is twenty-seven and a half feet in circumference at shoulder height. It has been protected from the wash of rains by a barrier of stones and its hollow trunk has been formed into a square room and fitted up as the village school house. Near it is another plane tree which measures twenty-six paces in circumference at the base. Of a group of trees at Chojakend, east of Tashkend, the largest is a rotten and hollow old stump, looking like the ruin of a giant wall, from which six vigorous lateral trees have shot up. The whole plant is 48 paces in circumference at the base, and the hollow of the principal trunk is about 28 feet in diameter. A party of a dozen tourists from Tashkend once had a feast inside of this stump, and they were not cramped for room. The growth of plants in as hot a climate as Turkestan is very rapid, and trees have been known to make growths by measure, in one year, of from 15 to 20 feet, and a corresponding development in thickness. Nevertheless, good trees are rare, and the few of extraordinary size owe their preservation to the respect in which the natives hold the places near which they are found.

A BIG FAILURE.

The Toronto *World* of Jan. 29, says:—For some time rumor has been busy with the affairs of the British Canadian Lumber and Timber Company, the offices of which are at 34 Scott street. It was stated yesterday that a reciever had been appointed, or rather that the company had assigned to the banks interested.

The company had a capital of a million, mostly Scottish money, was formed some years ago, and bought extensive limits and mills from the Cook Bros., Geo. J. and H. H. It is understood that the Messrs. Cook made a good thing out of the sale. Geo. J. Cook is president of the company, and J. S. Lockie, formerly manager of the Bank of Commerce, is its financial manager. The banks mainly interested are the Toronto, Quebec and Commerce, the liabilities to which foot up to close on to a million dollars, perhaps half of which is secured. The Commerce is the largest creditor.

It is now alleged that the rosy statements made as to the value of the limits have not been realized, and that not only will the shareholders loose all the money that they put in it, but the ordinary creditors will not be paid, and the banks will be out a large amount.

A short time ago it was hoped that the company would pull through by each of the banks advancing $50,000 and the Scotchmen the same amount, but this appears to have been abandoned.

A reporter asked Mr. H. H. Cook last night about the matter, but he had nothing to say.

An Engraver's Block.

As the lines in a good wood engraving have to be very thin, it becomes very necessary that the wood should be of a firm and strong fiber that will not break, or split, or crumble easily. And, indeed, the wood used for engraving is one of the hardest known. It is box-wood, and is obtained almost exclusively from Turkey and Asia Minor. The grain of boxwood is exceedingly close and smooth, and engravers' "blocks" consist of slices each about an inch thick and usually from two to four inches square, cut *across* the grain of the tree. The box-tree does not grow to any considerable size, and when a large block is desired it has to be made by screwing and gluing a number of small blocks together very tightly and securely. It is said that it would take more than one hundred years for a boxwood tree to grow large enough to furnish a block in one piece of a size sufficient to include the whole of a page engraving in an ordinary magazine.

AUSTRALIA.

We take the following from the monthly circular of Messrs. Lord and Hughes, timber brokers of Melbourne, dated 19th December, 1883:

Since our last advices of 21st ultimo, our market for the principal descriptions of timber has been more than supplied by imports, and prices then ruling have hardly been maintained. Baltic flooring and Oregon timber are easier, and American lumber about maintains prices then quoted. Our market cannot recover as long as it is being flooded by so many arrivals.

The deliveries from store yards have been to an extent almost unprecedented, showing that the trade are doing a larger business than ever; in fact, the demand for building materials has not been exceeded for years, and there is every prospect of a continuance.

The arrivals have been—Avanti and Concordia, from Frederickstad; G. P. Harbitz and Eduard, from Christiana, with flooring; Marpesia, form Sundswall, Subra, from Hudlksvall, Forsete, from Skutskar, with deals; Thos. R. Foster, Birchgrove, Melrose, L. B. Gilchrist, and Martha, with Oregon laths and pickets; Martha P. Tucker, from New York, with shelving, plaster and slates; Beatrice Havener, from New York with laths and plaster; Aberdeen, Gulf of St. Vincent, Thurland Castle, Cairnbulg, Copernicas, Duncone, Loch Ness, Glendower, from Great Britain with flooring, slates, galvanized iron and cement; Robin Hood, L'Avennir, and Alice Muir, from Kaipara, with Kauri pine; City of Adelaide, from Sydney, with shelving; Nemesis, Bunninyoung, Wendouree, Konoowarra, from Sydney, with cedar, doors and laths; South Australian and Victorian, from Adelaide, with doors and laths; Mercury, from Launceston, and Victorian from Adelaide, with slates.

Red Deals.—Imports: 1,037 standard, from the Baltic. The arrivals have been Marpesia, from Sundswall; Subra, from Hudiksvall; and Forsete, from Skutskar. The cargo, ex Leto, was sold by auction on 27th ult., when MARMA brand, 9x3, realised 5⅜d.; MB, 9x3, 5½d. to 5d.; 11x3, 5¼d. to 5d., all at per foot of 9x3.

Spruce Deals.—Imports: *Nil*, Sales by auction comprise cargo, ex Hooghly, and small parcel, ex Eme. The cargo ex Hooghly, was sold on 27th ult., at (as was anticipated) extremely low rates, 11x3 realising 2⅞d. to 2⅝d., 9x3, 2¾d, to 2⅝d. 12x3 to 20x3, at 2¼d. per foot of 9x3.

Oregon Timber.—Imports: 3,193,707 feet super. The arrivals have been—Thos. R. Foster, Birchgrova, Melrose, L. B. Gilchrist and Martha. Sales by auction comprise cargoes ex Birchgrove and Star of Peace, and small parcel ex Matilda, all sold on 27th ult., prices ranging from £6 17s. 6d. to £6 10s. The cargo ex Thos. R. Foster, was offered at auction on 30th ult., but £6 12s. 6d. being best bid, it was withdrawn.

Lumber.—Imports: Shelving, 72,176 feet super. The arrivals have been—Martha P. Tucker, from New York, and City of Adelaide from Sydney. Sales by auction have been made ex Eme, Navesink, City of Adelaide, and Martha P. Tucker. Michigan clear pine realised £18 to £16 10s.; white pine shelving (Peabody brand), £13 to £13 7s. 6d.; other brands, £13 7s. 6d. to £12 15s.

Pitch Pine.—Imports: *Nil.* Auction sales. —*Nil.*

Redwood.—Imports: *Nil*, Auction sales. —*Nil.*

Flooring and Weatherboards.—Imports: 4,800,420 feet lineal. The arrivals have been Avante, Concordia, G. P. Harbitz, and Eduard, from the Baltic. Sales by auction comprise shipments ex Marie Becker, Ragne, Cairnbulg, Adele e Sabina, Loch Shiel, and Loch Ness. The following being prices realised:—Red 6x1½, 10s. 6d. to 9s. 9d.; 6x¾, 7s. 9d. to 8s.; 6x¾ 6s. to 5s. 9d.; 6x½, 4s. 6d.; 4-out weatherboards, 7s. 3d. to 6s. 6d.; white 6x1½, 9s. 6d. to 9s.; 6x¾, 8s. to 7s. 9d.; 6x¾, 6s. to 5s. 9d.; 6x⅝, 5s.; 6x½, 4s. 7d. to 4s. 4d.; 4-out weatherboards, 6s. 6d. to 6s. 3d.

Kauri Pine.—Imports: 726,710 feet super. The arrivals have been Robbin Hood, L'Avennir, and Alice Muir, from Kaipara. Sales by auction during the month have been of a very limited character, being confined to only portions of cargoes ex Robbin Hood and Alice Muir. The cargo ex L'Avennir, was offered, but there being no inclination to buy evinced by the trade, it was withdrawn.

Cedar.—Imports: 111,652 feet super. The arrivals have been ex various steamers, from Sydney. Logs have been sold at auction during the month, at 45s. to 29s. according size and quailty.

Red and White Pine (Colonial.)—Imports: *Nil.* Auction sales.—*Nil.*

Doors.—Imports: 194. Auction sales.—*Nil.*

Laths and Pickets.—Imports: Laths,13,395 bundles; pickets, 5,529 bundles. Sales by auction during the month have been made Oregon laths, 4½-feet, at 40s. to 37s.; 4-feet, 33s. Spruce 4-feet, 34s. 9d. Baltic, 1½-feet, 27s. Oregon pickets, 6 feet, £10 2s. 6d. to £9 10s.; 5-feet £9 2s. 6d.; 4½ feet, £9 5s. to £9; 4-feet, £7 10s.; spruce, 5-feet, £5 2s. 6d.

Slates.—Imports: 305,163 pieces. The only sale by auction has been the shipment ex Mercury, from Tasmania.

Plaster.—Imports: 900 barrels. The parcel of red beech ex Martha P. Tucker was offered at auction on 14th inst., when only 50 barrels were sold at 12s. 9d, each. The parcel of 200 barrel ex Alert was sold on 30th ult. at 13s.

Cement.—Imports: 2,950 barrels. There have been no sales by auction during the month. Privately a good demand exists. Gostling's has been selling at 15s.; and Knight, Bevan & Co.'s at up to 15s. 3d, Auction sales.—*Nil.*

Galvanised Iron.—Imports: 737 tons. There have been no sales by auction. Privately Orb, and other best brands have had sales at £20 10s.; inferior brands, £20. Demand slack. Auction sales.—*Nil.*

Hardwood.—Imports: *Nil.*

Palings.—Imports: *Nil.*

ENGLISH IMPORTATION OF TIMBER.

The following is a list of the most important classes of timber imported into England during 1883:—

AMERICAN TIMBER.	
Yellow pine	4,359 logs
"	47,825 "
Hickory	15 "
Oak	284 "
Cherry	34 "
Poplar	144 "
Ash	731 "
Walnut	123 "
Elm	384 "
Birch	453 "
STAVES.	
American	50,854 pieces
Memel	222,590 "
Danzig	80,566 "
Norwegian	206,101 "
Riga	4,200 "
Austrian	48,000 "
TIMBER.	
Danzig	2,070 logs
Windau	3,619 "
Memel	1,489 "
Libau	539 "
OAK.	
Danzig	317 "
Stettin	20 "
Memel	250 "
WAINSCOT.	
Austrian	271 "
Memel	30 "
Riga	142 "
PITCH PINE.	
Logs	1,396 "
Deals	876 "
DEALS AND BATTENS.	
1,444,354 pieces.	

MINDEN.

Fatal Accident.—One of the most melancholy accidents that has occured for some time took place on Friday last at John Coburn's lumber shanty in the township of Sherbourne. It is a common thing in the woods to draw logs to the edge of a precipice or steep hill and dump them over, to be skidded at the bottom. On Friday morning James Quigley, and two others were engaged at a Skidway, situated at the foot of one of these mountain dumps, skidding the logs as they came down, A load of three logs was brought to the dump, and the first two logs landed at the skid, end on, Quigley and his two companions stood on the last log of the skidway farthest from the dump. Quigley being in the middle, and the other two at either end. The usual warning was given from above and the third log was rolled over. Down it came, whirling through the air, and landing broadside on the ends of the first two logs which were endways to the skid, instead of stopping at that end of the skid, it was shot on to the logs already skidded and went bounding over them in a slanting direction to one end of the front log. The instant the men saw the log was going to come to them, O'Brien, who was on the end where the log was coming to, dropped off beside the skidway and was safe. The man on the other end also dropped off, though the log did not reach where he was, but Quigley being in the middle, jumped off, and tried to run ahead of it. The log, a twenty-four inch one, and sixteen feet long, came bounding along, struck Quigley in the back, knocked him on his face, and then crushing his chest and shoulders, splattered the poor fellows brains for some distance. Death was instantaneous. One of the peculiar features of the case was that the unfortunate young man had a premonition of his impending fate, on the night before. On Friday morning when he awoke he told his companions that he had dreamed that a fatal accident had occurred, that some one had been killed with a tree, and so impressed was he with his dream, and that some fatal accident was about to occur, that he declined to go out to work. After a time he was persuaded to go out, but altogether against his inclination, and the result was a melancholy verification of his premonition. The young man was much esteemed. He was conveyed to the home of his brother in Verulam, on Saturday.—*Bolcaygeon Independent.*

SWEDEN.

The Stockholm correspondent of the *Timber Trades Journal* writing on Dec. 15th says:—The weather is still uncommonly mild for the season in Norrland, and the latest advices are to the effect that "driving" operations in the woods as far north as the Sundswall district cannot be proceeded with. There will consequently be no production of logs to speak of in the principal export districts until the second week of January at the earliest, forest work being entirely suspended about Christmas time. There is, of course, plenty of time between the middle of January and the end of April to get out as many logs as usual, were there any inducements to do so, but all the mill owners that I have spoken to on the subject admit that it would be suicidal to make as many logs as of late years. The general concensus of opinion seems to be that a substantial reduction in the log-get will be made by most of the firms of standing, unless a a rise of price takes place before the end of February. In the event of the latter contingency occurring,no doubt mill-owners will endeavor to get hold of as much raw material as they can handle. The late events in Finland will also decidedly have an effect here, in making the banks watch with a less indulgent eye over the quality of the paper set before them.

NORWAY.

The Christiana correspondent of the *Timber Trades Journal* writing on Jan. 5th, says:—The early part of the winter having been very mild, the driving was impossible in most parts up to Christmas time. If a serious frost had then occurred, the peasants might have been tempted to disregard the traditional resting time, by taking up forest work immediately after the strict holidays. However, the mild weather has continued till yesterday, and even now the frost is probably not sufficiently intense to make marshes and pools in the forest passable. Consequently nothing more may be lost by conforming to the old custom of "drinking out yule" before recommencing forest-driving in earnest.

It is, however, now quite evident that this winter's production of timber will be considerably below the average. This will tend to keep prices of logs and of battens from going down in this country, to a great extent, independently of the state of the import market abroad.

The saw mills and flooring mills cannot very well be stopped, even if at times they have, especially the latter, to work with a small profit or none at all, which may have been the case in several instances last year.

A CANADIAN AUTHORESS.

There is in Ottawa at present, on a visit to some relatives. a lady, who is, or ought to be, well known throughont Canada, for she belongs to a family whose writings a generation ago were widely read throughout the British Islands and did much to clear away wrong impressions concerning our country. The lady referred to is Mrs. Trail, who is one of the Strickland family, every member of which was a writer of more or less renown. The most famous is, of course Agnes Strickland, whose historieal writings are very popular—a popularity which shows no signs of decreasing. The next best known member of the family is Mrs. Susannah Moodie, of Belleville, whose novel "Roughing it in the Bush" is still widely read. Mrs. Jameson and Major Strickland will also be remembered by all middle aged Canadians. Miss Strickland is the only member of the family who never visited Canada or wrote about it; Mrs. Jameson wrote a couple of volumes describing rambles through our then wild and untamed country, while the remaining three wrote almost exclusively on Canadian topics. Major Strickland's only work was "Twenty-seven years in Canada West." Mrs. Moodie's best known work, is "Roughing it in the Bush," a delightful acount of the trials and tribulations of Mr. and Mrs. Moodie while establishing themselves in the "back woods," while Mrs. Trial is most remembered for her Canadian Crusoe, and "The Backwoods of Canada."

Almost every late Canadian writer on literary and historical subjects, always assumes that it is only during the past few years (since he began to write) that a Canadian literature really came into existence, and if he refers in anyway to proceeding works, it is with the object of calling it "hog wash" or some equally mellifluous appellation. If some of these self-constituted critics would be induced to read the works of Mrs. Trail and Mrs. Moodie, or look over the issues of the *Literary Garland*, which flourished in Montreal for some years during the "forties,"in which many stories by these ladies first appeared they might come to the conclusion that there were some brains in the countr yprevious to their advent upon it.

The only connecting link between the two periods of literary activity, is Mr John Lovell, of Montreal, who then, as now, was a very prominent publisher. Indeed, the *Literary Garland* of that day was a venture of his, but although it was an excellent perodical; it, like so many other Canadian literary ventures, was not warmly supported, and the sequel can be gussed.—*Montreal Star*

THE FLOODS IN THE STATES.

Cincinnati,—The river has risen 4½ inches since midnight, and is rising fast at Portsmouth. It is falling rapidly at head-waters but a further rise must come before it all runs out. Marietta and Parkersburg have been entirely cut off for two days.

Youngstown,—Two hundred houses are inundated here. A dozen industrial establishments and rolling mills have been abandoned, and hundreds of workmen are out of employment.

Toledo,—The latest advices from the towns along the river above the city are to the effect that the water has passed the highest point reached last year. At ten this evening the water at South Toledo was seven feet higher than ever before.

Philadelphia.—The Pennsylvania railway bridge at Manayunk, which was carried away last night, had just been completed. It cost over a million.

Pittsburg.—This city and Allegheny are now free of water and business is being assumed.

Wheeling.—The Baltimore and Ohio engine shops are carried away. Main street bridge caved in this afternoon. Wheeling is in danger of famine. Nearly all the bakeries and many of the groceries are beneath the water. Milk and meat, except salt meat, is almost impossible to procure. The stock of provisions is rapidly

becoming exhausted, and there is no prospect of replenishing. The situation is hourly growing graver. Many appeals have been received from inundated parts of the surrounding country for provisions.

CINCINNATI, Feb. 9.—At 9 a.m. the river was 63 feet 6½ inches, a rise of over four inches since midnight. The weather is cooler. At Gallipolis the river is four feet higher than last year. The impression that a large tract of the city is covered by water is erroneous, and the portion submerged, except in the suburbs, is not much used for residences. The arrangements for preserving peace and preventing crime are better than when there was no flood.

Portsmouth, Ohio, is almost entirely under water, and completely cut off from outside communication. The water is fourteen inches higher than the flood of 1832. The river is still rising, and many houses are floating away. There is great suffering and worse still is expected. At daylight this morning a fire broke out in a feed store in the midst of the business portion of the city, caused by the slacking of lime submerged in the rising waters. Six buildings were burned to the water's edge and the walls fell in. The churches are all under water. Every engine-house and school house in the city is filled with drowned people. The river is rising over half an inch an hour, and it is raining hard. We have not heard from any place for three days. The people are in great distress.

WHEELING.—The situation among the homeless grows worse. Not enough food can be procured to feed them and give aid to neighbouring towns. The mayor said to-night he had hoped to avoid appealing for aid to the country at large, but feared it would have to be done. Clothing and food and money are badly needed. At Glass house two children died to-day from exposure and insufficient and unfit food.

On the representation of the citizens of West Virginia that local resources are insufficient to relieve the suffering, the Governor telegraphed to the Senators and representatives in Congress asking that the joint resolution for relief be increased to one million dollars. The outlook for the future is gloomy. Many cases of premature confinement are reported. Some sufferers on the south side are reduced to the extremity of cutting meat from cows found dead as the flood recedes. The Ohio River Railroad is believed to be entirely ruined, section after section, trestle work, bridges and cars being washed away.

The Sahara Sea Scheme.

At a banquet in Paris to members of the scientific press M. de Lesseps said the scheme for creating a sea in the desert of Sahara will hortly be realized. M. Roudair, the French hydrographer, who is concerned in the project cutting through the dunes which separate the Mediterranean from the desert to transform the arid sands into a fertile country, is about to start for Tunis armed with the necessary firman from the Sultan to begin operations.

The first game of the Montreal carnival hockey tournament came off on Monday, when the Victorias won from McGill by a goal, to nothing. The McGill men claimed a goal which the referee disallowed, whereon the McGill men had the bad taste to leave the ice.

MR. Silas Morse, father of Lady Tupper, died at Pugwash, N. S., on Thursday night. He had been in his usual health until Sunday, when he became paralyzed on one side, and never rallied. He was 97 years of age.

IN regard to the recent decision of the Italian court, ordering the conversion of the property of the propaganda at Rome, a high church dignitary declares that it will not be tamely submitted to. He also asserts that the order can easily be evaded, and that its effect will be to array the whole influence of colonial Catholic missions against Italy.

MISS BARLOW, of Leicester, who some time ago presented the John Clay Barlow lifeboat to Great Hartlepool, and who has since built a number of almshouses in memory of her brother, the late Mr. John Clay Barlow, has just given the sum of £8,000 for the erection of an additional church in the parish of Knighton, a Leicester suburb. This is the third new church that has been presented to Leicester by single individuals within a few years to meet the rapid increase of population. In two instances considerable endowments were also provided.

The Value of U. S. Farms.

The *Lumberman's Gazette* quotes the following figures from the census of 1880 to show the value of farm lands and products in the United States :—

Number of farms	4,008,907
Improved land	284,771,042
Value of farms	$10,197,096,776
Value of Implements	$406,520,055
Value of live stock	$1,500,464,609
Value of farm products	$2,213,402,564

Interesting Discovery.

In a cutting for a new sluice in Ceylon lately some labourers found 17 feet underground a series of remains dating from before Christ. There are hundreds of plates, dishes, etc., all in fragments, most of them differing in shape and in their better quality from those now in use. A few implements and a javelin-head and arrow-head of iron, as well as some beads and other ornaments were also found.

A GOOD COSMETIC.—The best cosmetics are good soap and water to obtain purity of the skin, while for boils, blotches, obstinate humors and impurities of the blood, Burdock Blood Bitters is the best of all purifiers.

AN OPEN LETTER.—Messrs. T. Milburn & Co. *Dear Sirs*,—I can honestly recommend Hagyard's Yellow Oil as the best reliever of rheumatic pains of all the many specifics offered for sale, and as a sufferer for years I have tried every known remedy. I remain, respectfully yours, JOHN TAYLOR, 190 Parliament St., Toronto.

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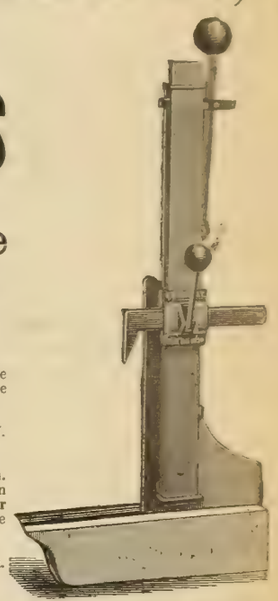


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TEMPERED IN OIL.
25 BALL and 5 HEEL to Set
The Calks are now used by all the principal Drivers in Maine and New Brunswick. Kept by Dealers in Lumbermen's Supplies
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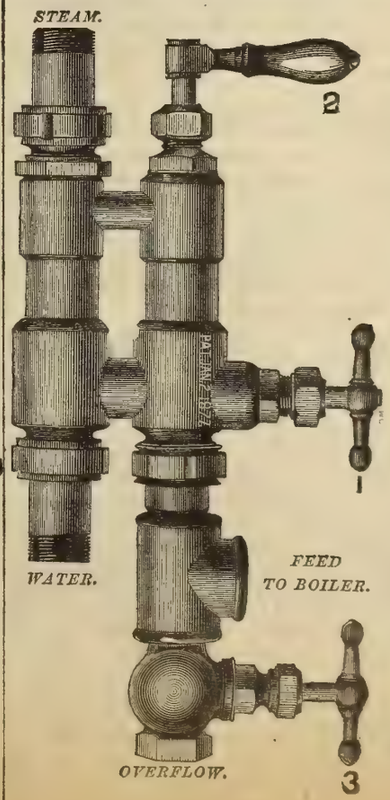
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MANUFACTURER OF
KNIGHT'S PATENT "EXCELSIOR"
SAW MILL DOGS
The Sawyer's Favorite
For Holding Logs upon a Saw Mill Carriage while being Sawed into Lumber.

MISSISSIPPI, June 7th, 1883.
HUGH GIBSON, ESQ.,—Your Patent Excelsior Mill Dogs give entire satisfaction, and is certainly up to your recommendation. They are the best Mill Dog in the market. I am very much pleased with them.
Yours Respectfully,
PETER McLARREN.

BERKLEY, April 20th, 1883.
HUGH GIBSON,—SIR,—The Dogs I bought of you give satisfaction. They beat any Dog that I ever saw for ripping or edging lumber on carriages. They are just the thing for scantling. I would not take $50 for them to-day and have to wait for another pair to come from you, because I believe they make two dollars a day for me.
Yours truly,
2L1y GEO. S. BROWN, JR.


EXCELSIOR DOG.

Manufactured by HUGH GIBSON, CHATHAM.



THE
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The Best Feeder known for Stationary, Marine or Locomotive Boilers.
THE INJECTOR PERFECTED!
All Sizes lift water 25 feet. No adjustment required for varying Steam Pressures.
Over 50,000 Now in Use.
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FOREST LAND.

Forest land perpetually sends upwards, in spring and summer, from leaf and soil, vast columns of vapor, which added to by condensation from the atmosphere, fall again in showers. This moisture it obtains by the sponge-like formation of its bed, which does not, like a field, allow the water to run away over its suface, or just under it, but holds great quantities to part with them steadily to the clouds above, and to the invisible water-courses beneath the soil, from whence springs arise and waters are fed To preserve water courses and also to maintain fertility it is necessary to keep some wooded land, and to preserve it in a condition to yield these benefits. This can be done in Ontario by the simple means of excluding cattle, when three things would follow: The young undergrowth, keeping grass out, will cover and preserve the forest soil in good condition. Fresh trees will be ready to replace the present. A growth will arise that will not blow down.

We have still throughout the province a portion of woodland on most farms; on many, it is true a small, but on many a large, portion. It is now, while we yet have such, that it is time to act and to save the vast expense of replanting by using that which will replant itself, and grow for us without labor, and much quicker, trees fitter for our purpose than any we could, though with great labor and long time, reproduce when the forest is gone.

What is to be noticed as a most important point is that these present woodlands naturally have the water holes, as they are called, being very often springs, to which cattle resort to drink. For this purpose the forest is left open to them, and they destroy the young trees, and bite off the first shoots that spring from the self-sown seeds. An ox will press down a sapling twenty feet high, till he gets the top near enough to bite off the leaves and young branches. But, if cattle were excluded from part of the forest, and the path to the spring fenced, that spring, fed by the protected wood, will yield quadruple the supply of water. On the other hand, wherever cattle are allowed to range the forest will be rendered so bare of undergrowth that the springs will, with the gradual drying up of the country, cease to flow. This has already happened in very many cases.

The forest, protected, will soon grow up everywhere with clumps and bunches of young trees. These will not necessarily need thinning; the strongest will grow to tall trees, the others not. Yet here will be an excellent chance to get what trees you want, for here will be all varieties, and a few strokes of your knife will leave the clump all maple, elm, hickory, or what else you prefer. If the white oak—our best and now our scarcest timber—be not there, plant some of its acorns. What has stopped its reproduction is the swine. That animal evidently swore at Highgate

> "Never to eat the red oak acorn,
> When he could get the white,
> Unless he liked the red the best."

and not liking the red, where once he sets his cloven hoof no white oak springs up. But most of the rest will be with you.

The portions of woodland yet left in settled Ontario are, most of them, in situations materially to benefit the great source of fertility—the water courses. If we dry up a land, the experience of all ages tells us we impoverish it. Here we have left often along the course of streams, often on heights, many blocks of forest. But one after another these are going. Sons often get that portion of land—they must clear it or have no farm. In this situation only one plan has yet been offered. It is that if a proprietor choose to reserve for forest purposes a block of a few acres, five, ten, or fifteen, the assessor can say to him, "as long as you fence that portion, keep cattle out, and it is in good forest condition, it shall be free of township taxes; but if you wish the land for any other purpose, on payment of the back taxes remitted you can do as you choose with it."

It is very plain what the result of this would be. Many farmers aware of the advantages of a continuous supply of timber, would readily enough agree to fence a piece and keep it in forest. In a few years wood will be far more scarce than at present; these reservations will be, by that time, in a thoroughly growing, healthy, and reproductive condition, they will every year be able to take more or less full-grown trees from it, and it will be recognized as a valuable adjunct to the farm that no one will think of cutting it down.

It will be noticed also that the legislation suggested will be merely permissive. If a farmer wish to allow his cattle the range of all the bush he has left, no one will interfere with him; he simply will not apply. Those who have the bush to spare will do so. The result would probably be, even if only one farmer in two or three found himself in a position to avail himself of the arrangement, that all over the settled portion of Ontario we should have these small reservations, which would number many thousands, a collection, each where it stood, of beautiful young undergrowth, handsome, half-matured trees, and stately old ones. Each of these would act (as a forest dried up and withered, its reproductive powers destroyed by the inroads of cattle, cannot act) as a most valuable assistant to fertility to the surrounding fields. It would undoubtedly, as experience shows us, assist in procuring refreshing showers at the proper season; it would also do much in maintaining in existence, and even in starting afresh, the small springs and water courses which are so valuable to the farmer.

I have no doubt that after a short time in operation its merits would be so fully recognized that any person wishing to buy a farm would ask, "Have you availed yourself of the opportunity given by legislation to protect a portion of forest? If so, your farm will be worth $100 more to me." Of course there are many other things to be done relative to forest preservation, but this would be so easy, cheap, and practical; it would, as many leading men assure me, be at once adopted by so many persons, and the benefits to be derived so great, that, while we have still everywhere woods for the purpose, I should be glad to see it put in partice.

R. W. PHIPPS.

MR. GLADSTONE AS LUMBERMAN.

Mr. Gladstone, it appears, includes among his numerous vocations that of a dealer in lumber. We are not aware whether he entered voluntarily into the business, but at all events an insight to it has been offered to public. He was applied to by a Lambeth workingman who wanted to make some tables and chairs out of the trees felled by the premier. Mr. Gladstone replied that he would make known the subject of the Lambeth workman's request to his son, "as he regulates matters of the nature referred to." About a month afterward—a most unbusiness-like delay, we should imagine—Mr. W. H. Gladstone wrote to the workman in these terms:—"In reference to your letter, I beg to ask you how many feet you require. We have a beech of about sixteen feet available, but I fear the carriage to London would be heavy." The offer was accepted, but the beech turned out to be eighteen feet long, so that the stock book of the firm has evidently not been very carefully kept. It is understood that, in the letter in which Mr. Gladstone handed over the conduct of the transaction to his son, he expressed some desponding sentiments with regard to this branch of the family business. Gladstonian timber has not been in great demand lately, the last transaction having taken place in Leeds in 1880.—*Lumber World.*

The Choice of Woods.

It may be said that oak is best adapted to the dining-room, as everything therein should be substantial; mahogany, walnut, or inlaid ebony, to the reception room because all therein should be rich and luxurious, and that the lighter kinds of upholstery are more appropriate to the bed-chambers, since the prevailing air of a dormitory should be one of thorough cleanliness; yet there is no necessity to circumscribe the range of individual selection.

Love in a Shanty.

Somebody seems to have been offering "camp love stories" to the *Northwestern Lumberman* for we find the following in a recent issue:—Camp love stories, we are obliged to respond to a story writer, are not in order. We are fearful that the gentleman who is solicitous on this question never visited a lumber camp, else he would locate the scenes of his love story elsewhere. There is not much love running wild around a camp. There is no one for the loggers to fall in love with except the cook, and very often the cook is a man. If not a man, some one's buxom wife fills the position, and it would be highly improper for any chopper to entice her out the window, make his way out through the woods, "over crisp snow, sparkling in the moonlight," and marry her. There is any amount of profanity, story-telling, tobacco smoking, and reading going on around a camp, but no love making to speak of.

Bent Wood.

A piece of timber that has been steamed, whether it is bent or not, has its stiffness increased. It is more brittle than it was before, and for some uses, it will not do as well; and yet there is a quality of timber that the steaming process and the kiln-drying process effect very much the same; they both cook the gum in the timber and make it brittle and stiff. There is a grade or class of hickory that is benefitted by being steamed or kiln-dried for use as spokes or whiffletrees. There is a kind of hickory that never becomes stiff by a natural process of drying, and one of the desirable qualities of a spoke, rim, or whiffletree is stiffness as well as strength; you take that hickory, and it is the very best we have, and steam it, and it is better suited for these purposes than it was before. It is difficult to tear apart a piece of bent wood; the fibres are interwoven one with the other, and when we come to split the stock open we find its character is entirly changed.

Causes of Fires.

Friction of Machinery is one of the most common causes of fire, especially at night. The shaft heats from the centre, and the heat may increase and spread after the machinery has stopped, Rats are the most common and dangerous incendiaries, by dragging greasy rags or waste into their nests, where the requisite heat and dampness are constantly present to create combustion, and they are sure to make nests in cold weather near steam pipes. Lighting apparatus, sparks and defective chimneys, are frequently responsible for destructive conflagrations. Spontaneous combustions of bituminous coal screenings is very common. Electricity generated by belts, steam pipes, steam heating apparatus, and steam feeds in saw mills, are causes of fires.

Over Work, *vs.* Regular Work.

An exchange remarks:—The savans, who are always trying to find out why a water-wheel runs faster by night than it does by day, could make more money for all hands if they could tell us why it is that overwork costs more money—much more—than regular work. In default of their attacking this question, we will attempt a solution of the matter. The reason over-work—Sunday or night work—costs more than regular work, is that less of it is done in given time. The reason why less of it is done is that the men are tired from their day's work; their energies flag, and the stimulus of increased payment—generally double wages—does not supply the place of rest. Persons paying for over time are buying their whistle at a very high price.

A Novel Weather Prophet.

It is stated that it is the easiest thing in the world to foretell the weather by observing the common white pine, *Pinus Strobus.* If we are to expect rain or snow within a reasonably short space of time, the branches of the last two season's growth will be pendulous. If such weather be a long way off, the branches will be raised rather than drooping.

A Poisonous Wood.

The attention of the Connecticut State Board of Health has been called to alleged poisonous properties of a wood from Panama called Cokobola which is largely used in the arts at Bridgeport, Conn. It is said to poison somewhat after the manner of sumac, and to attack everybody who comes in contact with it

There are rumors of trouble in store for land speculators who secured tax titles to valuable pine lands in Michigan and have been stripping off the timber.

Land Sharks Outwitted.

The Wisconsin woodsman must be credited with being a keener person than he has been regarded heretofore. Recently, the State advertised a tract of wilderness to be sold at auction, and it became known that the "land sharks" were laying schemes to buy it in cheap. A few days before the sale ten or twelve backwoodsmen appeared in town with long minutes of the value of the lands offered, the wood on them, etc. Being asked what the object was, they said to buy in. Here was the dilemma for the "land sharks"—these woodsmen would run the price up to its real value. So the land agents offered a sum of money for the minutes, and, to their surprise, the offer was readily accepted. After they bought the land they found they had been duped, for the minutes were false.

Stripping Bark.

Very few persons have any just conception of the amount of timber destroyed annually to secure bark for tanning purposes. An extensive lumberman of Elk county, Pennsylvania, gives some figures on this subject in regard to that county, which will give an inkling of the enormous destruction when the entire conntry is taken into consideration. He says the forests of that and adjacent counties are being robbed of 4,000 acres of timber every year, which has to be felled in order that the bark may be obtained for tanning purposes. There are four tanneries in Elk County, which use 50,000 cords of bark per year, and as a cord of bark will tan 175 hides, the 50,000 cords will tan 8,750,000 hides per year, which represents the annual production of the tanneries of Elk count.—*Lumberman's Gazette.*

Russian Lumber.

The official estimates of the value of the produce of Russian saw mill—13,000,000 roubles—affords no idea of the real extent of this branch of industry, as there is calculated to be quite 30,000,000 roubles worth of timber exported annually from Russian ports, of which only a small portion is shipped in a rough state whilst the demand for home consumption was probably still larger. The estimates take account only of the larget and most important saw mills. Besides these, are a great number belonging to landed proprietors, who own tracts of land and have small saw mills on their estates which are not included in the estimate. The largest export of shipment and other timber is from Riga, in which town there are fifteen saw mills of the largest size.

Axes.

A Maine logger says that if you are cutting small timber, which may be severed at from one to a dozen blows, an axe with a long thin blade, and as little bevel as is compatible with strength, is chosen, and at every stroke the blade is buried to the helve. If the purpose is to fell large trees or cut heavy timber, and this same axe is used, it will bite deep in its stroke, but the chip remains in the timber after the incisions, and many more blows are required to dislodge it than were necessary to its formation Therefore, for this purpose an axe having a thick, heavy bevel and cutting not so deep is selected. The bevel acting as a wedge forces out the chip at the same stroke by which the incision is made.—*Lumber World.*

Tapping Maine Timber.

The *Northwestern Lumberman* says:—A project is on foot in Maine to build a railroad up the Passadumkeay valley to develop the timber region there. The road is to run from Passadumkeag to Lowell, nine miles distant. It is contemplated in the near future to extend the road to Princeton, where it will connect with the St. Croix & Penobscot road. Hon. John Morrison, of East Corinth, is pushing the enterprise very vigorously.

For a hard cold, with pain in the head, bones or through the chest, take Down's Elixir at once and in liberal doses, cover up well in bed, and our word for it, you will soon be well.

Blood Relations.—The best blood relations consist of a perfect circulation of healthy vital fluid—pure blood and proper circulation may be established in the system by the use of that grand blood purifier, Burdock Blood Bitters.

THE OLD ELM.

Judge Charles R. Ingalls, of Troy, is the owner of the paternal homestead of his family at Greenwich, Washington county, N. Y. Near one of the lines of the property stands a noble old elm, which has grown so large that its trunk extends into the adjoining lot. A person who had lately purchased that lot was about to cut down the tree; and to save it from destruction, the Judge paid many times its value for a strip of land next the homestead, and wide enough to protect the elm. In writing to a friend of this, he says: "It is so beautiful a tree that it might well be worshipped. . . . If you could see it in June, I am certain it would wake up your enthusiasm. Even with its naked boughs it seems to thank me for saving its life. I thank God I am able to protect a spot so dear to me. I do not believe it is all sentiment, but if it is I treasure it sacredly."

This incident has suggested the following lines, which are inscribed to Judge Ingalls, by his friend Noah Davis, presiding Justice of the New York Supreme Court:—

An elm stood on my father's line,
A mark of his ancestral bounds,
His care in youth, his pride in prime,
In age the glory of his grounds.

He watched its growth as, year by year,
It spread new beauties in the sky,
And oft I've seen the starting tear
Of joy light up his aged eye,

When summer's robe of lustrous hue
Draped all its lithe and graceful limbs,
And southern breezes, sighing through,
Dropped music set to Nature's hymns.

Thick foliage caught the sunbeam's rays
As I, in play or dreaming sweet,
Through frequent hours of Childhood's days,
Pressed the green carpet at its feet,

Or, if the winds let through the beams,
To dance upon the sward with me,
With clamorous joy I chased the gleams,
Elusive as the sparks at sea.

Long years have fled, and I am left
To guard alone the dear old place,
Of nought of beauty yet bereft,
Save many a loved but absent face.

Abroad the ancient elm has spread
Its roots and boughs with firmer stand,
Till half its stately trunk and head
Invade and hold a stranger's land.

For whom no memories of the past
Its store of sacred joys recall,
Nor filial loves around it cast
Affection's arm to stay its fall.

And he hath said, "The tree must die,"
Its doom the old elm seemed to know.
In autumn's gales I heard a cry—
A sough of grief foreboding woe.

Fear not, old tree, thou shalt not die!
Gold is but dross 'twixt thee and me,
Love unalloyed hath power to buy
A ransomed right to cherish thee.

'Tis done. Dear elm, thou'rt mine again,
Thy roots and boughs and stem are free
To lift their crown toward sun and rain
And birds shall nest and sing in thee,

Through all thy summers yet to come.
And when the last day sets for me,
Still tenderer hands shall keep the home.
And gentler love stand guard o'er thee.

My words of cheer the old tree hears,
With drooping boughs it strives to bless,
And raindrops softly fall like tears,
Fragrant with speechless thankfulness.

—*The Manhattan.*

An Expensive Coffin.

A kind of timber found buried in yellow clay in China, near the border of Thibet, is stated by Mr. E. Colburn Barber, of the British legation at Pekin, to be held in high esteem as a material for coffins, on account of the resistance it offers to decay and insect ravages. A single coffin made from its planks is valued at an equivalent of 300 pounds sterling. Unfortunately Mr. Barber has been unable to give any information concerning the botanical character of the subterranean wood.

THE Thunder Bay *Sentinel* says:—Messrs. Conmee & Thompson are going to get out 50,000 logs, and are advertising for tenders. It is likely they will build a saw mill soon.

Uses of Paper.

The uses to which paper may be put at some future day cannot be told at present. From the simple writing and printing paper we have slowly ascended to artificial parchment; water pails, bath tubs, boxes, houses, chimneys; and the latest use of paper has been made in St. Petersburg, Russia, in the construction of a paper vessel, twenty-five feet long and five feet wide. She is driven by steam, and the trial trips have proved quite successful. The recent trials made for the purpose have led to this experiment.

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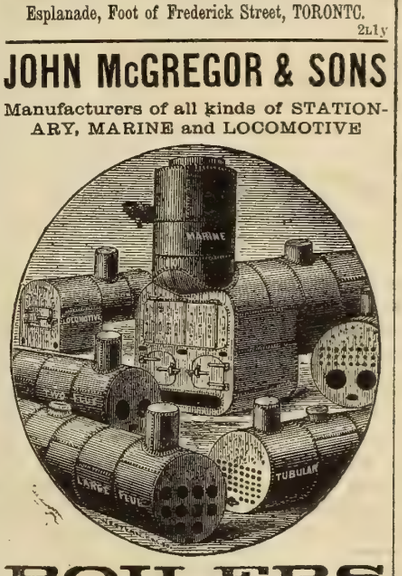
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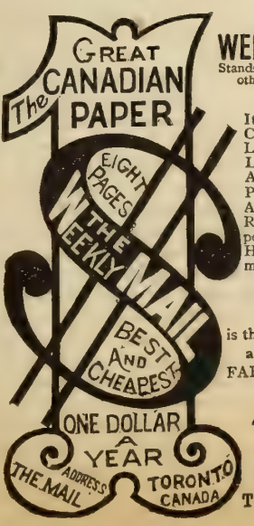
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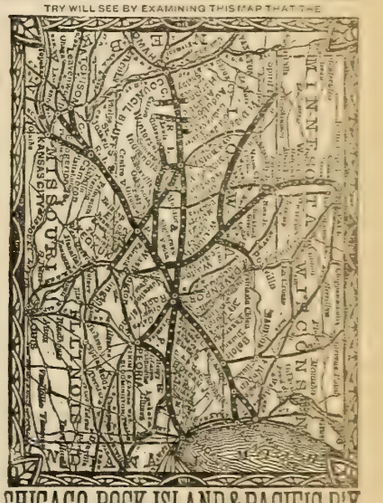
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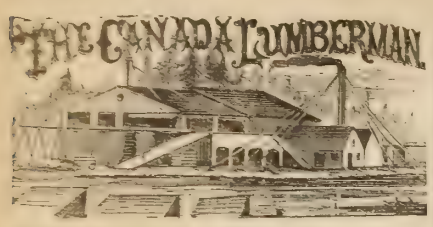
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The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., FEB. 15, 1884.

AN important Michigan industry is the business of getting out cedar lumber, which is used almost exclusively for telegraph poles.

OVER $100,000,000 is claimed to have been the oss in woodworking establishments by fire luring the first ten months of 1883.—*Lumber Trade Journal.*

AT Wilton, Me., Reuben Wilder was caught by a tree he was felling. His ankle was broken, and he nearly perished before he could release himself from the trap.

ON Saturday, Jan. 12, the Flint & Pere & Marquette railroad loaded 411 cars of logs, which scaled 1,203,000 feet. It is the biggest day's work that the road has ever done in logs.

DURING a big storm lately a number of logs broke from the boom on the Nesqually river, W. T., but most of them were saved. In some places the logs were jammed up in huge piles from 30 to 40 feet high.

BRITISH COLUMBIA claims to have the finest growth of marketable timber to be found in America, and cites as an instance of the size of its trees, one fir recently felled which scaled 20,580 feet, in four logs from 24 to 62 feet long.

An Ottawa correspondent says:—An American firm has purchased forty thousand dollars' worth of sawn lumber from Booth & Gordon, of this city. The price is said to be good. There is a heavy demand just now for horses for the lumber shanties.

IT is now believed that the former estimate of 125,000,000 feet of logs as the crop of the Eau Claire, Wisconsin, will be exceeded by about 50 per cent. and that the output will be very close to 200,000,000 feet. The favorable weather for logging operations all over the country is changing the prospects very materially, and Michigan is no exception to other pine producing regions.

THE Muskegon Car and Engine Company, Muskegon, Mich., will have to purchase 500,000 feet of hardwood lumber, 1,000,000 feet of soft wood, and 1,500 tons of iron, in order to fill a recently received order of 500 box cars for the Nickel Plate road.

LEE JOHNSON, an employe at Hansom & Co.'s mill at Tacoma, W. T., went insane over the terrible death of a comrade, at that place, a short time ago, and attempted to burn the mill. His plans were thwarted by the night watchman, and Johnson was sent to an insane asylum.

MACBETH & POWERS, of Eau Claire, Wis., have taken a contract of 120,000,000 feet of pine, to be put into the west fork of the Chippewa river. They run four camps there this season, and intend banking 15,000,000. of which they now have 5,000,000 on the skids, and have banked 1,500,000.

DRINK has been the cause of many a death at the lumber camps, but the numerous lessons seem to have but little effect. Thomas Duffy, a workman in Sage & Co.'s camp, near Roscommon, Mich., while on a drunk last week, was so badly frozen before being discovered that his life was despaired of.

A WEALTHY saw mill owner of Savanah, Ga., has mailed circulars to the yellow pine manufactories of the South asking them if they are willing to shut down their mills from July 15 to October 15, the Savanah gentleman believing that such a course would materially relieve the depression in the yellow pine market.

THE Thunder Bay *Sentinel* says:—Messrs. Watt, Moore & VanDusen, lumber merchants of this place, are getting out piles, and will shortly commence an addition to their lumber dock, which will give them sufficient water for vessels unloading lumber there. Their lumber yard will be removed to this dock in the spring.

A TREE was cut lately at J. S. Miller's camp, on Deertail, which measured 6,600 feet. It was made in six cuts, and scaled as follows:—First cut, 1,590 feet; second cut, 1,480 feet; third cut, 1,200 feet; fourth cut, 1,070 feet; fifth cut, 780 feet; sixth cut, 540 feet. G. W. Rathbun was the scaler. This is one of the largest trees that was ever cut on the Chippewa waters.

THE large trade done by Russia in deals is mostly with England. Of 900,965 standard dozen shipped at St. Petersburg last year 725,977 dozen were for the United Kingdom, other countries only required 174,988 dozen. It appears, therefore, that England takes more than five times as much wood from St. Petersburg as all the rest of Europe together, and most of the other shipping ports, when their export accounts come to be made up, will no doubt show a very similar result. If this trade were interrupted by war, England has plenty of markets to go to for deals; but where could Russia find such another customer?

THE FREIGHT ON HARD AND SOFT WOOD LUMBER.

Mr. William C. Bailey, of the hardwood lumber firm of Bennett & Bailey, Minneapolis, Minn., was in Chicago recently, and while there called the attention of some of the railroad officials to the discrepancy in rates for hard and soft woods, a difference which hardwood men are trying to have done away with. Under the present arrangement the railroad tariff on hardwood is from 12 to 16 per cent. higher than that on soft wood. That this is so is claimed to be a relic of the olden times when none but the very best black walnut logs were cut, and when the excellent quality of both logs and lumber would return dealers such profits that they could afford to pay a little higher rate. The freight tariff of a quarter of a century ago was arranged on that basis and the same percentage of discrimination has prevailed ever since, although it must be admitted that for several years past the hardwood men have been forced by the demands of the trade to cut and ship all grades of wood indiscriminately. Today, in shipping a carload of walnut lumber it is doubtful if the general average will run more than 20 or 25 per cent. of good walnut, while the balance will be mostly culls. In these days of active competition, the difference of a few cents on rates is a very material matter, and it has attracted the attention of the dealers in hardwood, who propose to set the matter fully before the railroad officials.

Hardwood lumber is always shipped in the rough, and as freight is paid on a weight basis the railroads are obviously more favored in that respect than when handling dressed softwood, In case of collision, it takes but very little jamming around to ruin dressed pine, but a car of rough hardwood will stand considerable rough usage without material injury, and it is very much less liable to danger from fire.

The discrimination in freights, too, is apt to induce "sharp" practices. It is an open secret that a car of lumber is occasionally sent from a softwood yard marked pine, when an investigation would disclose half or three quarters of the cargo to be hardwood, and in rare cases cars are known to have been loaded entirely with hardwood and shipped from softwood yards marked softwood, thus saving a considerable amount in the freight bills, especially on long hauls.

Handicapped by such a freight discrimination and the evils that must of necessity grow out of it, how can a hardwood man successfully compete with his more favored rival? An equal freight tariff would be beneficial to the hard wood men without operating to the least disadvantage of the dealers in soft wood. It would stimulate business, and do away with some wrong practices that have been growing for some time. The difference in rates is not intended by the railroads as a discrimination to build up one branch of the business at the expense of the other. It is simply following the old rates of by-gone years, and now that attention has been called to the question we trust it will be promptly taken care of in a manner that will be satisfactory to all concerned.—*Northwestern Lumberman.*

CALIFORNIA REDWOOD.

A San Francisco paper notes the departure from that port of a ship loaded with redwood and other finishing timbers of California growth. The shipment is in the nature of an experiment, but it is stated that the conditions of cost transport and market have been carefully studied, and that there is no doubt of the success of the enterprise; and it is predicted that other ships, and many of them, will follow. It is a fact well known that Oregon produces a greater variety and much finer woods than California. The Port Orford cedar is of the same general charater, but in every practical respect a better timber than the redwood. Its color is better for panel and other fine work, and its grain is more distinct. We have a dozen or a score of other fine woods, but the best and most beautiful of all is the myrtle, which grows along the streams of the southern coast. The beauty of this wood is beyond comparison. It is nearly as dark as black walnut, mottled with mahogany-colored streaks, is hard and susceptible of a perfect polish, and retains is toughness when sawed into the thinnest veneering. There is no ornamental timber, except rosewood, equal to it. Even the curly and bird's-eye maple, so much admired, is dingy and cheap-looking beside it, and the famous redwood is as inferior as ordinary cedar is to mahogany. If this beautiful timber were once introduced in the East or in Europe, we believe that it would soon be in great demand. It grows in forests in the counties of Coos, Curry and Douglas, easily accessible to the ocean. Who will introduce it?—*Lumber Trade Journal.*

WASTE OF FOREIGN FORESTS.

When the forests of such a country as Cyprus were destroyed, said Mr. Thistleton Dyer, in a discussion in the British Society of Arts, it was like a burned cinder. Many of the West Indian islands are in much the same condition, and the rate with which the destructian takes place when once commenced is almost incredible. In the Island of Mauritius, in 1835, about three-fourths of the soil was in the condition of primeval forest, viz. 300,000 acres; in 1879 the acreage of woods was reduced to 70,000; and in the next year, when an exact survey was made by an Indian forest officer, he stated that the only forest worth speaking about was 35,000 acres. Sir William Gregory says that in Ceylon, the eye, looking from the top of a mountain in the centre of the island ranged in every direction over an unbroken extent of forest. Six years later the whole forest had disappeared. The denudation of the forests is accomplished by a deterioration in the soil; and the Rev. R. Abbay, who went to Ceylon on the Eclipse expidition, calculated, from the percentage of solid matter in a stream, that one-third of an inch per annum was being washed away from the cultivated surface of the island. In some colonies the timber was being destroyed at such a rate as would lead to economic difficulties. In New Brunswick, the hemlock spruce is rapidly disappearing, one manutacturer in Boiestown using the bark of one hundred thousand trees every year for tanning. In Demerara, one of the most important and valuable trees, the greenheart, is in a fair way of being exterminated. They actually cut down small saplings to make rollers on which to roll the large trunks. In New Zealand, Captain Walker says he fears that the present generation will see the extermination of the Kauri pine, one of the most important trees. All these facts show that this is a most urgent question, which at no distant date will have to be vigorously dealt with.—*Lumber Trade Journal.*

HOW TO CHOOSE MACHINERY.

There are machinery agents going through the country who make serious mistakes in recommending to mill builders the purchase of machinery that is not adequate to the capacity that will be required of it. Naturally the man who desires to build a mill usually limits the amount of money he wishes to invest in it, and the agent knowing this, figures accordingly. He must bid against other machine manufacturers, and as a consequence specifies machinery of a smaller capacity than he ought to. Often the purchaser is not an adept in the milling business, and he swallows implicity the story of the agent; and it often brings him to grief. It is no rare thing for the owner of a mill to replace the boilers, engine, and other machinery the second year, because the requirements have not been met. This is not only a direct loss to the mill man, but forever after he will look with an eye of suspicion on the make of machinery discarded. No successful mill man ever complained that he had too much power. An engine doing the greatest amount of work possible does poorer work than when not severely pushed, and the same principle applies to the working of machinery generally. A surplus of power is one of the most profitable things to have in a mill. The means of securing it are a little expensive at the start, but the investment pays big interest. Such power saves excessive wear, breakage, makes good work possible, and prevents a good deal of profanity.—*Northwestern Lumberman.*

THE CHINESE FOOT RULE.

A writer in the *North China Herald* gives some curious information respecting the foot measure in China. At present it varies largely in different parts of the country, and according to different trades; thus the foot of the carpenter's rule at Ningpo is less than ten, while that of the junk builders at Shanghai is nearly 16 inches. But a medium value of 12 inches is not uncommon. The standard foot of the Imperial Board of Works at Peking is 12½ inches. A copper foot measure, dated A. D. 81, is still preserved, and is 9½ inches in length. The width is one inch. The small copper coins, commonly called *cash*, were made of such a size sometimes as just to cover an inch on the foot rule. In the course of centuries it was found that the foot had increased half an inch, and a difference in the dimensions of musical instruments resulted. Want of harmony was the consequence, and accordingly in A. D. 247 a new measure, exactly nine inches in length, was made the standard. Among the means employed for comparing the old and new foot are mentioned the gnomon of official sun-dials, and the length of certain jade tubes used according to old regulations as standards. One of these latter was so adjusted that an inch in breadth

was equal to the breadth of ten millet seeds. A hundred millet seeds, or ten inches was a foot. The Chinese foot is really based on the human hand, as is the European foot upon the foot. It strikes the Chinese as very incongruous when they hear that we measure cloth, woodwork, masonry, etc., which they regard as especially matters for the hand by the foot. Of the jade tubes above mentioned, there were twelve, and these formed the basis for the measurement of liquids and solids 4,000 years ago. They are mentioned in the oldest Chinese documents with the astrolabe, the cycle of 60 years, and several of the oldest constellations. It is likely that they will be found to be an importation from Babylon, and in that case the Chinese foot is based on a Babylonian measure of a span, and should be nine inches in length.

TORONTO LUMBER CASE.

A special sitting of the York Civil Assizes was held before Mr. Justice Armour at the Court House, Toronto, on Feb. 9, to hear Lockie *et al.* v. Tennant *et al.* The plaintiffs, Mr. J. S. Lockie and Mr. T. S. Playfair, are the trustees of the American Lumber Company, which is now in liquidation, and they bring the action to recover $10,000, the amount of two promissory notes. These notes were given by the defendants, J. & F. Tennant, in paying for lumber purchased from the British Canadian Lumber and Timber Company. The notes passed into the hands of the plaintiffs, being endorsed by the British Canadian Company. The defendants refuse to pay the notes on the ground that they received no value for them, the lumber having been burnt at Midland before it came into their possession. His Lordship found as follows:—"I find that the non-removal of the lumber before the fire was as much the fault of the B. C. Lumber Company as of the defendants. I do not think that the non-removal affects the question upon whom the loss by fire will fall. I find the lumber was to be measured and inspected at the time of the shipment, and that the lumber which was destroyed by fire was never measured nor inspected. I find that under the construction of the contract the British Canadian Lumber Company must bear the loss of the lumber destroyed by fire. I find that the defendants, the Tennants, have paid for the lumber shipped in the contract. I find that the present plaintiffs are entitled to recover against the defendants the amount of the two notes. I find that the British Canadian Lumber Company are bound to indemnify the defendants against payment thereof, and direct that they do so indemnify them against the payment thereof and against the costs of the suit. Mr. B. B. Osler, Q. C., and Mr. Gordon for the plaintiffs, and Mr. Christopher Robinson, Q. C., and Mr. McDonald for the defendants.

Saw-Mill Statistics.

Some idea regarding the improvement in saw mill machinery may be gathered from the figures of the last census, says the *Chicago Lumberman*. It is stated that the total horse-power used in saw mills of America is represented by 641,665. In 1870 the power per hand was 4·28, and in 1880 5·56, showing an increase of 30 per cent. That is, in 1870 one man did the work of 4·28 horse-power, while in 1880 he took care of the lumber, &c., produced by 5·56 horse-power. The percentage of increase of the total power for ten years was 28·09.

When Wood is at its Prime.

"From the best data I can get," says a writer in an exchange, "my opinion is that the time when wood is at its best is when it is ripe. That point is reached in November or December. At that time the year's growth is complete. The wood takes a rest and will last better and wear better than when cut at any other time. It also has time to season before insects can bore it. The hickory, ash, and oak are liable to become "powder posted" or worm eaten if cut in the early part of the season because the wood is full of sap and green. The tree cut at that time is like an animal killed in hot weather and is attacked by flies that deposit their goods, producing the worm that eats wood. Another reason for cutting in the fall or early winter is the fact that the tree in the early part of the season is full of sap, which ferments and commences to decay immediately. Before the wood has time to season the sour sap destroys the life of the wood. Hickory is peculiarly liable to be worm eaten, and when the worms once start to work it they never leave it until it is all consumed, literally ground to powder."

Concerning Railroad Ties.

A railway journal says: Railway construction is bound to go on until it reaches a limit at which it ceases to be profitable. The consumption of ties will increase at a corresponding rate, while the question of future supply will become more serious and pressing as the cost increases and our native forests become thinned. It is pretty certain that wooden ties will not be discarded until our timber resources are far less abundant than they are now, or until some other material as cheap and as serviceable is substituted for wood. It is not likely, however, that any such material will be found, but it is more than probable that the durable properties of wood, especially the soft and porous kinds that are now available for ties, will in time be very much increased by some of the preservative methods that have already proved very effective so far as they have been tried. But these methods are not likely to be used very extensively in this country until the cost of ordinary ties is considerably more than it is now.

Hardwood.

Although the season is so favorable for the getting of hardwood logs the manufacturers of hardwood lumber are not taking the advantage of it that the handlers of pine are. The downward price of hardwood, and the sluggishness of the markets, have made many a manufacturer decidedly tired, and until the demand and prices improve, it will take more than a cold winter to induce him to pursue his business with enthusiasm. Lumber manufacturers will not suffer from this apathy. If there is a partial halt until a portion of the heavy stock of poor lumber is worked off, a double object will be the result—a part of the obstruction that now lies in the way of the welfare of the trade will be cleared away, and the better grades will advance.—*Northwestern Lumberman.*

A Sheffield-Made Palace Car.

Messrs. Craven Bros., Darnall Carriage and Wagon Works, Sheffield, have just completed for the Buenos Ayres Great Southern Railway, Limited, a sleeping and dining car, which is believed to be the largest of its kind ever constructed in England. It is 56 feet in length in the body, and 60 feet long over the buffers. The internal dimensions are nine feet four inches wide by nine feet five inches high. The body of the car is of East Indian teakwood. The end, frame and body are built solid, with the addition of steel plates and angles to the sides of the car. The bogie trucks are made entirely of steel, with Mansell's patent boss wheels.

THE Winnipeg *Times* of Feb. 4th, says:—Major Camp, the celebrated lumber king arrived in the city last night from Minneapolis. He was seen by a *Times* reporter this morning and said: Business is generally dull in the lumbering line this winter, there being very little going on with the exception of hauling of logs. The roads in the woods are very good winter, being in a far better condition than any previous year. The amount of lumber to be cut this winter for manufacturing purposes will be almost equal to that cut last eeason. This applies generally to the whole Northwestern lumber cut. The price of lumber is lower than last year, there having been a recent decline of $2 per thousand, There are 2,000 men employed this year along the Mississippi."

IF you are troubled with a "hacking cough," Down's Elixir will give you relief at once. Warranted as recommended, or money refunded. Price 25c, 50c, and $1.00 per bottle.

A LONG TIME.—Fifteen years of suffering from the tortures of Dyspepsia is indeed a long time. A. Burns, blacksmith, of Cobourg, was thus afflicted, but it only required four bottles of Burdock Blood Bitters to completely cure him.

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MIRAMICHI, N. B.

Mr. J. B. Snowball's wood trade circular issued from Chatham, Miramich, N. B., for the year 1883, says :—

As forcasted in my last annual report, the winter of 1882-83 proved most favorable for logging operations, and a much larger cut was procured than usual for the force employed. The Spring, however, proved excessively hard for getting the logs to the booms and, on that account, the stock arrived in the market at a cost equal to that of previous years.

Several bank agencies were opened last year in the lumber districts, which, being anxious to procure business, made heavy advances to operators who had previously looked solely to the shippers and mill owners for support, and the latter lost control of the production. The business being a new one to these institutions they appeared not to have considered the amount of capital required to carry it through the long time necessary to realize on such stock. Becoming alarmed they closed most of the accounts and forced their clients to sell, and many thousands of standards of this stock were thus forced on the European markets that did not bring, in many cases, half of first cost.

On account of the heavy losses sustained and general depression existing in business, operators were a month later than usual going to work this season, and their operations are on a small scale compared with previous years. The total cut is estimated at 70,000,000 super. feet, against 145,000,000 super. feet last year, and against an average of 133,000,000 super. feet for the past five years. This reduction in the season's output will apply generally to the Provinces of New Brunswick and Nova Scotia.

Freights from this port were comparatively steady during the season, ranging from 60s. to 70s., the latter rate being obtained towards its close.

I have again added the export of the Province of Nova Scotia to my annual circular, finding it necessary for a correct estimate of the Lower Ports business.

The stock of round and sawn woods being wintered is estimated at 40 million super. feet, against 45 millions last year and 70 millions in 1879.

The shipments for the past four years were as follows :—

1880	155	Millions	superficial	feet.
1881	128	"	"	"
1882	117	"	"	"
1883	149	"	"	"

The total lumber shipments of New Brunswick in 1883, as compared with 1882, were as follows :—

ENGLISH YARDED STOCKS.

The *Timber Trades Journal* says :—With regard to the yarded stocks for the respective years 1882 and 1883, we have the dock list before us, made up to the last day of the old year, to study, and find it yielding just such a result as we had led our readers to anticipate ; showing on deals a shortage of only some 85,000 pieces or so, and battens about 500,000 pieces, stocks of ends being about balanced. Altogether there is a shortage on Baltic stocks of the descriptions mentioned of something like 6,000 standards, which is, after all, a trifle to a great port like London.

Yellow pine stocks show very little difference between those of the past and the previous year, the preponderance being mostly on batten sizes and ends. The comparison runs thus :—Deals, more in stock by 63,000 pieces ; battens, 44,138 pieces ditto, and ends, some 500 pieces ; altogether there are a thousand standards or so, more of these goods now in the docks than there were a year ago. This is a mere bagatelle, recollecting that in 1882 there was a very light importation in pine. Spruce stocks this year are now some 143,000 pieces more than they were last year, but even this is not much to influence values, if the demand is anything like on an improving scale. It must not be forgotten that in American goods London supplies a large outlying district in addition to its own consumption, so that the stocks with anything like a fair demand are likely to work off before the fresh goods arrive in the summer.

Flooring stocks show a difference in favor of 1883 of some 400,000 pieces, equal to about 1,200 standards. Whether values can recover in the face of these large stocks depends on the turn of activity the demand will take when the season has thoroughly begun. According to those best able to judge, a very quiet time is anticipated, though if the reports as to the stocks at the shipping places being moderate are correct, some improvement in the prices of this description is more than probable.

Of pitch pine planks there are nearly three times the quantity now in stock that there was this time twelve months, which does not look encouraging for holders, for the reason that timber of this description in the ponds is also considerably heavier in stock than it was at the end of 1882.

Against this we have the prognosticated shortage at the Gulf of Florida ports to comfort us, with the growing demand for the article both here and on the American side to prevent prices sinking to any alarming extent.

While treating of floated timber we may mention that east country timber (Danzig, Memel, Stettin, &c.) is some 3,000 to 4,000 loads in excess of that of 1882 ; present stocks of yellow pine timber are, however, about equal to those of the year named.

On the whole, however, of the soft woods in log, the stocks now in hand are heavier than they were a year since, which seems to point to a stationary market, and some stimulus to the demand will have to arise to advance prices.

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent Office, Jan. 29, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., N. W., Washinghton, D. C. :

Barrel-finishing machine—R. O. Dobbin, Waterloo, Ontario, Canada.

Barrel-making machine—S. Wright, Egermont, County of Chester, England.

Bit and drill brace—J. D. Richardson, Brooklyn, N. Y.

Chuck for holding fittings—S. P. M. Tasker, Philadelphia, Pa.

Felly planing machine—S. T. Kennan, Menasha, Wis.

Match-making machine—C. J. & J. M. Donnelly, Philadelphia, Pa.

Polishing machine—J. Pierron, Elizebethport, N. J.

Saw-frame rod—J. M. Koeberle, Philadelphia, Pa.

Saw-set—J. S. Long, Murphysborough, Ill.

Saw-tooth—A. Krieger, Columbus, Ohio.

Saws, (hanging circular)—W. D. Sherman, Grand Haven, Mich.

Sawers-gague—G. S. Black, Indianapolis, Ind.

Tool-handle—C. L. Bellamy, Arlington, N. J.

Wood-splitting machine—A. Fucho, Cannstadt, Wurtemberg, Germany.

A Gigantic Building.

Some facts concerning the Produce Exchange building, now being erected in New York, will be of interest, says a contemporary. The foundation is built upon 15,034 piles ; there are 109,796 feet of yellow pine capping timber, 17,530 square feet of base stone, and 64,732 square feet of building stone. The building fronts 307 feet on Broadway and Whitehall street, 159 feet on Stone street, 150 feet on Beaver street, and 300 feet on New street. The tower at the southeast corner of the building is 48 feet square ; the height of main building from side walk to base of tower 120 feet ; height from side walk to top of tower, 225 feet ; and height from side walk to top of flag-pole, 396 feet. The size of the main room of the building is 220 by 145 feet, and the height 47½ feet. The number of square feet of foundation of the main building is 44,754, of the tower 2,725 feet, and terrace 4,128 feet, making a total of 51,607 square feet. The building and land will have cost $3,000,000 when completed.

Free Lumber.

WASHINGTON, Jan. 8.—There is little doubt that the House will abolish the duty on lumber. Representative Stockslayer, of Indiana, said to a reporter last night ; "I am very much interested in it myself and have found that there is a strong feeling in favor of free lumber in every State but Michigan and Wisconsin and they are not solid against it by any means. The farmers of the central States where there is much timber wish free lumber. They want their forests protected by admitting Canadian lumber free of duty.

THE *Canadian Manufacturer* says :—Various kinds of timber that used to be considered of no value except for burning now find a ready market for various manufacturing purposes. The Dutton *Enterprise* says that there is such a demand there for elm and basswood cut into posts and delivered there by the railway track. An immense quantity of such timber is still standing in the counties of Lambton, Kent, and Essex, in the western part of the Ontario peninsula.

Just So.

The *Wood-Worker* aptly remarks :—"In this day the manufacturer who persistently sticks to old business ways, and older tools and machinery, need expect little sympathy if he finds himself forced to the wall through unsuccessful competition with more enterprising neighbors. This is decidedly the age of improvements, and the man who does not keep up with the procession, like the woman who hesitates, is lost. There are some tools and some machines that will always be standard, but they are not usually the ones that make or lose the money. The model manufacturer of to-day has the latest improved and very best machinery, has good workmen to operate it, and looks closely after the minor details of his business. The "little foxes spoil the vines," and the little leaks spoil the balance sheet. All this does not imply that a man is to buy every machine that is brought out ; but it does not mean that old-styled, poor-working and badly constructed tools are very liable to bring about a financial catastrophy.

Woodsmen in the States.

Woodsmen from Canada have met with much disappointment in the states this season. Formerly all they had to do to obtain higher wages than they could get at home was to cross the line. Now it is different. The low wages paid by the operators this winter would be a magnificent argument for the tariff men had the duty on lumber been removed before the decline. Tariff or no tariff the managers of logging jobs, as well as others, will hire men for as little money as they can. Men this winter are plentiful—the supply exceeds the demand—which accounts for the difference in the price of labor this year and last. There are some men in the woods who are working for their board ; many others receive from $14 to $15 per month. We hear of several Canadians who failed to obtain work and returned home. The rush to the woods shows that more men are out of employment this winter than usually at this time of the year.—*Northwestern Lumberman.*

Sumac Leaves.

According to a Baltimore paper the sumac business at Petersburg, Va., which but a few years ago was in its infancy, has reached large proportions, and become an important industry. The receipts of leaves this year will aggregate over 7,000,000 pounds. Three large factories are kept in constant operation, and their products find ready sale. The Virginia sumac is said to be the best in the market, and has latterly largely superseded the foreign article. Hundreds of people make their living in the summer and early fall seasons by gathering leaves for hundreds of miles around the country contributing to the Petersburg market.

Maine Lumber Industry

On the various waters of this state, last winter, there were cut 532,607,107 feet of lumber. The Penobscot is the greatest source of supply, there having been cut on that river and its branches 140,285,000 feet, or more than one-fourth of the whole. The next greatest cut was made upon the Kennebec—128,572,000 feet. On the other rivers as follows :—St. John, in Maine, 68,365,000 ; Saint Croix, in Maine, 46,500,197 ; Androscoggin, in Maine, 29,000,000 : Saco, 20,000,000 ; Narragusgus, 11,085,000 ; Machias, 27,000,000 ; Union, 25,300,000 ; Denneys, 2,500,000 ; other waters, 26,000,000.—*Bangor Whig.*

Devastation in England.

Accounts of the severe gales that swept over the British Isles during the last week in January tell a tale of great destruction. It is said that in the neighborhood of Ayr, within a radius of some 10 miles, 200,000 trees were blown down.

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., will send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N. B.—No risk is incurred, as thirty days' trial is allowed.

NEW BRUNSWICK SHIPMENTS, 1883.

Ports.	1882. No. Vls.	1882. Tons.	1882. Sup. feet Deals etc.	1882. Tons timber.	1883. No. Vls.	1883. Tons.	1883. Sup. Feet Deals, etc.	1883. Tons Timber.
Miramichi	235	135,123	117,006,935	2,714	279	172,398	148,994,306	3,316
St. John	269	210,587	193,769,100	10,706	270	205,311	181,517,932	15,661
Bathurst	33	20,242	17,816,784		53	27,483	24,414,955	120
Dalhousie	38	20,867	15,552,566	4,011	44	26,838	18,726,737	7,881
Richibucto	35	15,455	13,829,650		49	23,425	21,090,150	
Chediac	31	13,149	11,378,000	5	21	10,255	9,049,000	
Caraquet	7	3,557	3,312,804	230	11	5,180	4,241,368	40
Nachville	10	3,932	3,198,559		26	6,400	3,445,000	
Totals	658	422,912	375,864,398	17,666	753	477,290	411,479,448	27,018

NOVA SCOTIA SHIPMENTS, 1883.

Ports.	No. of Vls.	Tonnage.	S.f. deals, etc.	Birch Timber.	Pieces Palings.	Miscellaneous.
Annapolis	2	1,597	686,000		3,000	
Amherst, including Pugwash, Tignish and Northport	34	18,121	13,094,000			600 masts and spars.
Guysborough	20	8,106	6,171,000	2,737	6,000	
Halifax, including Margaret Bay, Sheet Harbor and Ship Harbor	75	41,360	33,549,000	1,759	23,000	
Liscomb	17	6,461	5,244,000			
Parsboro	22	19,366	17,322,000			
Pictou including Tetamagouche	6	2,994	543,000	1,680		
Port Medway	1	601	489,000			
Yarmouth	2	816	820,000			
Totals	179	99,422	77,918,000	6,176	32,000	

Against 85,752,000 sup. ft. from Nova Scotia in 1882.

BOSTON LUMBER INSPECTION.

The figures given by the Surveyor-General of the amount of lumber inpected in 1882 and 1883 are as follows :—

White pine boards and plank, Eastern and Canada	18,618,224	11,884,829
White pine timber and joist, Canada	500,066	
Yellow pine boards	7,490,252	10,062,188
Yellow pine timber	16,183,497	7,277,239
Spruce boards and timber	44,621,524	34,835,939
Hemlock boards	6,397,636	4,693,374
Whitewood (poplar)	5,044,540	5,994,053
Walnut, ash, oak and cherry	20,151,402	12,394,710
Total	119,007,121	87,172,832

Michigan Hardwood.

There are immense tracts of hardwood lands in Michigan, which, if properly preserved, are destined to become as valuable as the pine lands which have heretofore been such a source of wealth to the possessors. Beech and maple is abundant in the north counties, and the owners thereof seem to entertain a very slight appreciation of their value. The following item from the *Furniture World* will serve to open their eyes in this respect :—"Several kinds of hard wood lumber are gradually coming into use which a few years ago were unnoticed. Beech is one of them. It is cheap and abundant, while the more popular hardwoods are becoming comparatively scarce and consequently high-priced. Beech has a fine grain, is quite durable and is used in the manufacture of school and church furniture, chairs, and to a certain extent in furniture. The red variety has a handsome appearance, and can be made to imitate cherry."
Lumberman's Gazette.

Lumber Failures in 1883.

The lumber failures in the United States in 1883 were 162, divided as follows : Manufacturers, 84 ; wholesalers, 38 ; retailers 40. Among the manufacturers 14 were in the eastern states, 19 in the western states, 5 in the Pacific states, and four in the territories. Five wholesale dealers failed in the eastern states, 13 in the middle states, two in the southern states, 15 in the western states, and three in the Pacific states. The failures in the retail trade were divided as follows : Eastern states, 9 ; middle states, 14 ; southern states, 1 ; middle states, 15 ; territories, one. In Canada and the provinces 19 manufactures failed, one wholesaler and three retailers. The liabilities of two concerns, Ferry & Bro., Grand Haven, Michigan, and L. Brainard, a retail dealer of St. Albans, Vt., reached $500,000 each.

Glass Flooring.

Glass is taking the place of wood for flooring in many Paris shops. At the Credit Lyonaise on the Boulevard des Italiens, the whole of the ground floor is paved with large squares of roughened glass embeded in strong iron frames, and in the cellars beneath there is light enough for the clerks to work by. The central hall of the Comptoir d'Escompte has lately been similarly provided. The prime cost is more than boards, but the glass lasts much longer. The glass is cast in slabs eighteen inches square and one and a half inches thick. The light it transmits is of a bluish tinge.

Sale of Timber.

Messrs. Salisbury & Hamer held a sale recently, at Matlock Bridge, Derbyshire, England, of almost 10,000 feet of growing timber, comprising elm, beech, lach, ash, oak, etc. There were some eighteen lots offered, all of which were disposed of. The following extract from the catalogue shows the average prices fetched : 31 ash, beech, and elm trees. £19 ; 9 ash, £14 10s. ; 9 elm and 6 ash, £12 12s. ; 90 ash, beech, oak, and elm trees, £70 ; 17 larch, £20 ; and so on. The sale was good on the whole, attendance fair, and competition brish.

Black Walnut Culture.

It is a matter of surprise to many, that places and sections of country which are entirely unfit for agricultural purposes, are not utilized for tree culture. The black walnut, for instance produces a butt fourteen inches in diameter in as many years ; it requires no particular attention, makes an elegant tree and offers a desirable shade. No tree valuable for its timber in cabinet uses, will attain anything like the above dimensions in the same length of time, the only exception to this is the black birch.

A Small Steam Engine.

A remarkable small steam engine was exhibited at the Vienna Electrical Exhibition by Mr. Whitehead of torpedo fame. The whole thing was only about 5 inches high by 10 inches in diameter ; it was able to work with 2½ to 3 horse power and give motion to dynamo for the production of 25 incandescent lights of 16 candle power each. The whole apparatus, steam engine, boiler and electrical machine can be packed in a box 40 inches long, 26 inches wide and 13 inches high.

THE OLD ELM TREE.

As
I sat
beneath
an old elm
tree, the wind
went whistling by.
It bent its boughs
and softly breathed the
following with a sigh : "I
have lived here for many a
year, and seen the summer
come and go. The spring time
with its flowers and rain, the autumn
with its fruit and grain, the winter
with its chilling blast, when with
snow and ice the skies are overcast.
In summer time beneath my shade have
children often played, and oh, how oft,
beneath my boughs have lovers renewed
their plighted vows, and many a time
the old and feeble have sought my
shade to smoke their pipes or ply the
needle ; and thus its been with
smiles and tears I have watched
them come and go for three-
score years, and many a tale I
could tell of what in that
same time befell. But age
is creeping o'er my
head, and I fear
my roots are
dead ;
a n d
s o o n
I'll w-
i t h e r
a n d
decay
l i k e
those
who sought
my shade each day.

It Made a Difference.

Thirty-five years ago employed by the Governments in hewing timber in vast oak forests of Maine, was a company of men at work, among them being Pat McGlarkin and a Jimmy Magee, both fast friends. Jimmy took a fever, and Pat learning tnat his friend was given up by the doctors, paid him a parting visit to hear his last words before shuffling off this mortal coil, when the following colloquy ensued :

Pat—"Well, Jaimy, I understand the doctors have given ye up."

Jim—"Yes, Pat, it is most over wid me."

Pat (after a pause)—"Well, ye've not been a great sinner ; ye'll go to the good place."

Jim—"Oh, yis, Pat. To be shure I sthole a bit of the Government timber."

Pat (taking Jimmy's hand and assuming a diplomatic air)—"Well, farewell to ye. When ye reaches the good place tell them ye are well acquainted wid Pat McGlarkin."

"But, Jaimy, if anything happens to ye that ye should go to the other place, just tell that ye don't know divil a word about me."

A Curious Fact.

It is interesting, and it may be instructive to some, to learn that certain kinds of wood, although of great durability in themselves, act upon each other in such a way as to produce mutual destruction. Experiments with cypress and walnut, and cypress and cedar prove that they will rot each other while joined together, but on separation the rot will cease, and the timber remain perfectly sound or a long period.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain and cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup for children teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentery and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for children teething is pleasant to the taste, and is the perscription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

CURE FOR CHILBLAINS.—Bathe the feet for ten or fifteen minutes in water as hot as can be borne ; then apply Hagyard's Yellow Oil, and a cure is certain. Yellow Oil cures Rheumatism, Neuralgia, Deafness, Lameness, and pain generally, and internally cures Colds, Sore Throat, Croup, Asthma, and many painful affections.

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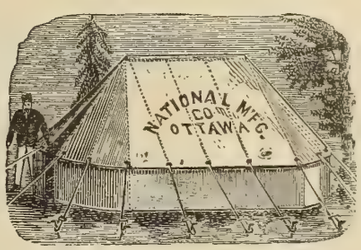
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Market Reports.

MONREAL.

From Our Own Corresponden!

FEB. 9.—We have now been enabled to get the following figures connected with local lumber trade for 1883, with comparative figures for 1882 and 1881, which may be interesting as showing the extent of the trade in the city.

Receipts by Canal	42,655,000 feet
" by G. T. R. at Point St. Charles	12,000,000 "
" by Harbor	11,657,090 "
" by Canada Pacific Railway	11,500,000 "
Total for city consumption, 1883	77,812,090 "
" " " 1882	90,000,000 "
" " " 1881	100,000,000 "

It will be observed from the above figures that there has been a steady falling off in the receipts since 1881. The reason assigned for the diminution of imports is that in previous years there was too much brought into the city, and had to be carried over so that merchants have curtailed their purchases in order to avoid having too much surplus stock. Roads in the country are good for getting lumber, and the probabilities are that as much will be got out this year as usual, although lumbermen say not, but as long as there is plenty of snow and water for conveyance the logs are sure to come. Some American buyers have been in the Ottawa market making enquiries, and one or two sales have been made at last year's prices. Builders are looking about them here and getting figures on which to tender for next season, but there is not much new work out yet. The C. P. R. have raised their rate of freight for lumber, while the Canada Atlantic railway continue their old rates and are now all the business. Prices here are steady and unchanged as follows :

Pine, 1st quality, ₰ M	$35 00@40 00
P ne, 2nd " ₰ M	22 00@24 00
Pine, shipping culls, ₰ M	14 00@16 00
Pine, 4th quality deals, ₰ M	11 00@12 00
Pine, mill culls, ₰ M	10 00@12 00
Spruce, ₰ M	10 00@13 00
Hemlock, ₰ M	9 00@10 00
Ash, run of log culls out, ₰ M	20 00@25 00
Bass, " " ₰ M	17 00@20 00
Oak, ₰ M	40 00@50 00
Walnut ₰ M	60 00 100 00
Cherry, ₰ M	60 00@80 00
Butternut, ₰ M	35 00@40 00
Birch, ₰ M	20 00@25 00
Hard Maple, ₰ M	25 00@30 00
Lath, ₰ M	2 50@ 3 00
Shingles, 1st, ₰ M	3 00@ 0 00
Shingles, 2nd, ₰ M	2 50@ 0 00

CORDWOOD.

As was expected prices have advanced owing to scarcity and high rates of freight. The demand is good, but buyers only operate to meet immediate wants owing to excessive prices. We quote at the wharves ex cartage :

Long Maple	$ 7 00
Long Birch	7 00
Long Beech	6 50
Tamarack	5 50

OTTAWA.

From Our Own Correspondent.

FEB. 4.—Very few measures affecting the lumbering industry have yet been introduced in the House of Commons. Among the innumerable private bills, already submitted, there is not one in reference to this industry. A number of enquiries have been made by members regarding transactions connected with limits in the North-West. The returns asked for in this connection have not yet been brought down. Mr. Cameron, of Huron, has moved for all correspondence, etc., respecting the Cypress Hills timber limits, the names of all applicants for a license for such limits, the dates of such applications, the residence and occupation of each applicant, a copy of the license or permit given, the premium or bonus per square mile, etc., etc., also copies of all claims made by the C. P. R. for said limits, and copies of all reports of Government employes respecting the said limits and timber. Mr. Charton has moved for a return, giving the total number of timber licenses or permits applied for and granted or refused since the 1st February 1883 ; the estimated area covered by each license or application, and the total number of square miles estimated to be covered by the timber licenses issued during the period named, etc., etc. Mr. Blake has moved for copies of all Orders-in-Council, correspondence and departmental orders, with reference to the granting, cancellation and suspension of license to cut timber on lands of the Indians near Fort William on the Fort William Reserves. In answer to Mr. Jackson, who enquired whether the Government has sold to an American syndicate, or any other syndicate, person or persons, since the 1st of March last a tract of land or timber limits in, or convenient to, the Bow River country in the North-West? Sir John Macdonald replied that there have been no such sales of timber lands, but the Government made leases of certain timber berths in the North-West during the last summer for disposal by public tender, and awarded them to the highest bidder in each case. Some of those who acquired berths were American lumbermen doing business at Eau Claire, U. S. Sir John promised, however, to bring down returns in this case.

REVENUE.

The report of the Minister of Inland Revenue for the fiscal year ended 30th June, 1883, laid before Parliament a few days ago, shows that the revenue accrued on timber and saw logs at the slides and booms mentioned was as follows :

	On River to Junction with the Ottawa.	*Further through Ottawa Works.*
Madawaska	$27,315 77	$ 3,492 86
Petewawa	20,542 60	4,996 98
Covelmge	4,977 09	1,437 02
Black River	8,157 46	3,668 21
Dumome	846 00	661 50
Gatineau	8,625 86	46 50
Main Ottawa and tributaries without Government Improvements		22,560 52
Total	$70,464 78	$36,863 60
Grand Total		$107,328 38

The following is a statement of the number of pieces of timber and saw logs that passed through the Government slides on the Ottawa river and its tributaries during the undermentioned years :—

	Square & flatted Timber. Pieces.	*Saw logs. Pieces.*	*Value.*
Jan. to Dec. 1883	424,999	413,269	$ 56,281 00
July '72 to June '73	303,268	2,024,980	110,185 32
July '82 to June '83	269,504	3,550,690	107,328 38

Of the total number of pieces that passed through the above mentioned works 167,695 were of white pine, 32,791 red pine, 14,291 boom and dimension, 19,151 flat and round.

The total revenue for culling timber during 1883, was $49,560, an increase of $2,779, or 28 per cent. over the previous year. The cost of culling for 1883 has been in excess of the accrued revenue by between $6,000 and $7,000. The Commissioner, in his report, states that the tariff is inadequate to meet the cost. He says "it does not appear very likely with reduced tariff now in force the revenue from this branch will meet the expenditure in any other years than those of exceptional activity."

MAINTENANCE.

The Minister of Public Works, in his report, states that at the session of 1882 the sum of $105,750 was voted for the construction and repairs and maintenance of Dominion slides, booms, etc., and at the session of 1883 an additional grant of $2,000 was made, making a total of $107,750 for the fiscal year ended the 31st ot June, 1883. The expenditure has been as follows :

Saguenay district	$ 5,477 80
St. Maurice "	21,683 88
Ottawa "	49,793 70
Newcastle "	5,204 97
Belocil piers and booms	90 90
River Richelieu	457 50
Total	$82,708 75

Alluding to the Ottawa district the report states :—"This district embraces the Ottawa River and its tributaries, the Gatineau, Madawaska, Coulonge, Black, Petewawa and Du-Moine Rivers. There are in it, altogether, 83 stations. The water in the Ottawa and its tributaries, during the season of 1882, was favorable for the driving of timber and logs, and, as a general thing, the rafts and drives reached their destination earlier than usual. During the winter and spring, repairs were made at the following stations on the Ottawa River :—Hull, Ottawa, Chats Rapids, Chenaux, Portage du Fort, Mountain, Calumet and Joachims ; and on the tributaries. At the Calumet and Black River slides the repairs were quite extensive, as well as at the Ragged Chute, on the Madawaska. On the lower reach of the Petawawa, the slides and dams were improved and strengthened. The Superintendent of these works, in his report (Appendix No. 13, pages 159-64), says :—

"The works at the principal stations on the main Ottawa River, when they were built about forty years ago, were well adapted for the descent of timber that then passed during the spring or early summer months ; but now that the operations of the lumbermen have been extended to the Chippewa and Temiscamingue districts, and to the more distant limits on the tributaries, the products of the forest do not reach the lower stations until late in the season ; and consequently at much lower stages of the water than the works were designed for. When opportunity offers the slide bottoms should be lowered and the approaches and outlets deepened in order that the late rafts may not be delayed in their passage ; and as this is a question of vital importance to those engaged in the great staple trade of the Ottawa, it is extremely desirable that steps may be taken, as early as possible, to have so desirable an improvement consummated."

Total number of logs or pieces of timber passing through the slides 3,820,202.

EXPORT.

Trade and navigation returns for the year 1883, show the total export of produce of the forest to amount to the value of $26,648,441, an increase of $1,685,790 over the previous year. The following are the number of feet and tons, and the value of the principal articles :—

	Quantitg.	*Value.*
LOGS.		
Hemlock, M, feet	4,374	$ 20,814
Oak	1,820	29,819
Pine	2,863	18,812
Spruce	6,255	30,858
All other	28,857	162,104
LUMBER.		
Deals, pieces	277,562	$9,028,672
Deal ends	12,136	330,149
Planks, boards and joists, M. ft	665,937	8,353,726
TIMBER, SQUARE.		
Birch, tons	25,355	194,345
Elm "	23,152	281,192
Maple "	790	10,035
Oak "	52,448	1,073,469
Pine white, tons	224,192	3,018,038
" red "	26,115	226,420
" all other, tons	6,698	88,257

The following are the foreign countries to which the produce of the forest have been exported, and the value of the exports :—

	Produce.	*Not. Produce.*
Great Britain	$13,027,337	$467,141
United States	9,916,040	768,910
Newfoundland	128,246	630
British W. Indies	394,821	3,825
Spanish W. Indies	91,200	14,844
French W. Indies	14,553	
Danish W. Indies	2,629	
British Guiana	102,559	
Dutch Guiana	4,832	
Hayti	5,838	
St. Pierre	17,754	
U. S. of Columbia	21,478	
New Grenada	8,900	
Brazil	24,261	46
Peru	58,723	
Chili	37,118	
Uruguay	288,095	
Argentine Republic	194,175	
France	417,089	1,400
Germany	4,609	
Spain	152,445	
Portugal	88,209	10,663
Italy	8,090	
Belgium	320	
Holland	22,048	
Madeira	21,826	
Canary Islands	2,370	
British Africa	47,569	
Dutch E. Indies	2,209	
China	63,243	
Japan	9,484	
Australia	250,784	10,256
Society Islands	9,961	
French Possessions in Africa	22,411	
Totals	25,370,726	$1,277,715

TORONTO.

From Our Own Correspondent.

The trade at all the retail yards is nearly at a standstill, not the slightest improvement observable, and this state of things is likely to continue until the advent of spring, or at least much milder weather than we have at present. Pine slabs and cordwood are about the only articles of railroad carriage just now ; full trains of this commodity are daily arriving, but of lumber scarcely anything is coming to hand. All the yards, so far as I have noticed them, seem to carry small stocks, and as soon as it begins to move considerable lumber will be required to replenish stocks. Quotations for car load lots of coarse boards and planks are slightly lower, but not sufficiently so as to alter prices from the yards. Scantling and bill stuff of all kinds remain firm. Some small lots of good lumber have been sent forward to Tonawanda and Buffalo by rail at fair figures.

In your last issue I notice Mr. Robt. Kerr, of the N. & N. W. railway, has come forward gallantly in defence of his company. It certainly requires all the pleas he can put in, and to judge from the tenor of his letter your readers would really be led to believe that your correspondent had been living back in the woods all his life and so knew nothing about railway matters. Mr. Kerr states that I make the grave error of adding shunting charges to their rates, and deducting terminal charges from that of the Midland, before making comparison. There was no error on my part at all, I gave facts as they then existed. I am well aware that Parkdale is a billing station, but Mr. Kerr knows quite well that for one car that is consigned direct from the mills to Parkdale, 20 cars are purchased in the Toronto yards, and require to be sent back there. And then Mr. Kerr asks the question, so innocently : Should we be expected to haul them back without making a charge for so expensive a service. I would like Mr. Kerr to answer this question : Why should a buyer from the western part of the city be placed at a disadvantage as compared with a purchaser from the eastern limits ; both come to Toronto yard and make their purchases, the eastern man gets his car shunted to the place he requires it free, and the western buyer pays $1 or $2, as the case may, to get his car shunted. Again, I would ask Mr. Kerr which is the most expensive service. In making the eastern shunts the train hands frequently consume the whole night in making them. The western shunt can be made in one hour's time. Try again Mr. Kerr, your logic is sadly at fault. Then again, I am told that my selection of shipping points is not fair. Suppose I try again and take Elmvale, on this highly favored Penetang branch, and what do we find. Penetang, nearly 15 miles farther north, and a steep grade requiring two engines to do one's work on this part of the branch, and from Penetang to quote Mr. Kerr's own words the charge is $20.40 and from Elmvale we are forced to pay $21.60. Now, I thought that I had acted quite fairly in taking Gravenhurst and Midland as points from which to deduct comparisons, especially as Midland is distant by rail one hundred and twenty miles from Toronto and Gravenhurst 15 miles less. I might have taken Penetang instead, only as Mr. Kerr well knows no lumber of any consequence comes to Toronto from there, the mills being all controlled by men having interests in the West, and ship there by water, and the lumber made in Collingwood is controlled by one firm, whereas the quantity shipped from Gravenhurst and Midland are about equal. And then to cap all is Mr. White's letter, and how is this affirmatory evidence to be got over ? I think the best explanation I can give of Mr. White's action is simply to quote a passage of scripture, which will aptly explain the matter : "Because of thine importunity I will avenge thee of thine adversary." Further than this I will say nothing in regard to Mr. White. I have no desire to place him in an equivocal position, as it is well known that he is at heart the firm friend of the lumbermen. Mr. Kerr has been playing a game for some time past which he will find played out. His method has been like this : Some of our lumbermen, quite unconscious of Mr. Kerr's wary ways, would call at his office and ask for better rates, or to get their shunting done free, and the question would then be asked, very softly, are the other roads giving you better rates, or shunting free ? if so and you will furnish me proofs, why of course, etc., but instead of the poor lumberman getting his wishes he has been simply trapped, and Mr. Kerr immediately proceeds to bombard Mr. White and Mr. Earls, and Mr. Kerr has at least one merit, for in a

business point of view I presume it must be called by that name, viz.: dogged pertinacity that serves him well in a contest of this kind, and he usually comes out one ahead.

Mr. Kerr seems much exercised at my extreme carefulness in covering up my identity. Really now I did not think that it was usual for regular correspondents to write over their name, and another more potent reason still for not so doing is my business relations might be somewhat compromised, as those who know him best will easily agree with me in saying, that in wrath he would not remember mercy. Trusting to hear from Mr. Kerr again quite soon.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
Scantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 50
Three uppers, Am. inspection	35 00@45 50
B. M.	
1½-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ₱ M	3 00
Sawn Lath	2 50

WINNIPEG.

The Winnipeg *Commercial* of Feb. 5, says: The demand amounts to very little at present. The old list of prices still continues in force, but a liberal percentage is often allowed for cash. Quotations are :—

Pine lumber, 1st, common boards, dressed	$26 50
do, 2nd, dressed	25 50
do, 1st dressed rough	26 50
do, 2nd do.	25 50
Sheating, rough	25 00
Timber 16 feet and under	24 00
do. over 16 feet, for each additional 2 feet	1 00
Dimension and joists 16 feet and under	24 00
do. do, over 16 feet for each	1 00
Fencing	25 00
2 and 3 in. battens	30 00
A. stock boards, all widths	50 00
B. do. do.	45 00
C. do. do.	40 00
D. do. do.	35 00
1st clear, 1, 1¼, 1½, and 2 inch	60 00
2nd do. do. do.	56 00
Window and door casings	50 00
Base boards, dressed	50 00
1st pine flooring, siding and ceiling	40 00
2nd do. do. do.	35 00
3rd do. do. do.	30 00
½ inch split siding, dressed	30 00
Spruce lumber—timber 16 feet and under	22 00
do. over 16 feet for each additional 2 feet	1 00
Dimension and joists, 16 feet and under	23 00
do do. over 16 feet, for each additional 2 feet	1 00
Boards	22 00
1st flooring, siding and ceiling	28 00
XX shingles	5 25
Star A shingles	5 25
X shingles	5 00
A. do.	4 50
Lath	4 50

BOSTON.

Cotton, Wool and Iron of Feb. 9, says:—There is only a quiet and moderate call in the supply of current wants, which are rather light. It is too early to predict with much certainty the volume of spring trade, but it now looks as if it would be of a fair amount and possibly nearly the same as a year ago. The severity of the latter part of the winter in part explains the general dulness of lumber for building operations. As to hardwoods, the market is quiet, with little change to note, but with the furniture trade opening up moderately.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

CHICAGO.

The *Northwestern Lumberman* says:—The lumber trade of this city is rising from its winter lethargy and shaking itself. Just as inquiries and actual demand for shipment began to show signs of renewed life, the railroads declared war on rates to Missouri river points, cutting the figure to ten cents a hundred pounds. This means a stir among the bones of trade that were becoming exceedingly dry from inaction. Two weeks ago—yes, one week—there were merchants that were almost ready to give up the business, so discouraged were they at the dulness prevailing. The same individuals are now so full of work that they have no time to reflect on the recent past. The signs of revival are everywhere visible. The uprising is phenomenal, considering its suddenness. The best sign of all is in the increasing team business, and the active use of office telephone. The clerks in the offices, also, are busy, and hardly have time to talk, unless the visitor has a bill for lumber in his hand.

Receipts of lumber, shingles, etc., for the week ending Feb. 7, as reported by the Lumberman's Exchange :—

	RECEIPTS. Lumber.	Shingles.
1884	3,523,000	
1883	941,000	332,000

FROM JANUARY 1, 1884, TO FEBRUARY 7, 1884, INCLUSIVE,

	RECEIPTS. Lumber.	Shingles.
1884	15,847,000	1,824,000
1883	14,944,000	5,294,000
Increase	903,000	
Decrease		3,470,000

STOCK ON HAND JAN. 1.

	1884.	1883.	1882.
Lumber	635,348,561	655,013,520	560,416,842
Shingles	461,930,496	299,946,350	260,906,494
Lath	65,983,140	76,361,002	48,820,438
Pickets	1,529,287	3,093,990	3,784,178
Cedar posts	397,832	78,034	219,012

ALBANY.

Quotations at the yards are as follows :—

Pine, clear, ₱ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	45 00@50 00
Pine, good box	22 00@33 00
Pine, 10-in. plank, each	00 42@00 46
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 21
Pine, 10-in. boards, 16 ft., ₱ M	28 00@32 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1½-in. siding, select	45 00@47 00
Pine, 1½-in. siding, common	18 00@20 00
Pine, 1-in. siding, select	43 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 2-in., each	00 00@00 20
Spruce, plank, 3-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ₱ M	40 00@43 00
Ash, second quality, ₱ M	25 00@30 00
Cherry, good, ₱ M	60 00@85 00
Cherry, common, ₱ M	25 00@35 00
Oak, good, ₱ M	40 00@43 00
Oak, second quality, ₱ M	20 00@25 00
Basswood, ₱ M	25 00@30 00
Hickory, ₱ M	40 00@40 00
Maple, Canada, ₱ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ₱ M	38 00@40 00
Shingles, shaved, pine, ₱ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 4 90
" clear, "	0 00@ 3 30
" cedar, mixed	0 00@ 3 50
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ₱ M	0 00@ 2 75
Lath, spruce, "	0 00@ 3 00

OSWEGO, N. Y.

From Our Own Correspondent.

Three uppers	$45 00@46 00
Pickings	35 00@36 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	11 00@15 00
Mill run lots	15 00@20 00
Sidings, selected, 1 inch	30 00@35 00
1¼ inch	30 00@36 00
Mill run, 1x10, 12 inch	18 00@20 00
selected	22 00@26 00
Shippers	14 00@17 00
Strips, 1 and 1½ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	22 00@35 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 25@ 3 50
Lath	2 00@ 2 20

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

AN Ottawa despatch says:—The following shanties on the Kippewa are at work at present:—Gilmour Bros., two shanties getting out logs; Allen Grant, two shanties getting out logs; Booth & Gordon, two shanties getting out logs and square timber; Sherman, Lord & Hurdman, three shanties getting out logs; Edward & Company, two shanties getting out logs; J. B. Grier, one shanty getting out square timber.

The Improved CLIMAX Sash Lock

MANUFACTURED BY MILLER BROS., GUELPH.

Holds the Sash in any position so that it cannot be moved either up or down, can be put on by anyone, only requiring two screws.

1y AGENTS FOR CANADA:— L21

RAE & WATSON, 22 Church Street, TORONTO, Ont.

JONES & SON,

Wholesale Lumber & Timber Dealers

39 Broadway, NEW YORK.

Oak, Ash, Cherry, Black Walnut, Poplar, Butternut

And all other Kinds of HARDWOOD LUMBER.

White and Yellow Pine Lumber and Timber.
Oak Ship Plank and Timber. Pine Deck Plank and Ship Stock Generally. L7

J. S. MAYO

IMPORTER AND MANUFACTURER OF

MACHINE OILS

OF EVERY DESCRIPTION.

9 Common Street, Montreal.

AMERICAN LUBRICATING OILS A SPECIALTY.

As I carry the LARGEST and BEST assorted Stock of OILS in the Dominion, I am prepared to fill all orders Promptly and at

LOWEST MARKET PRICES.

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SINGERS and public speakers are always benefitted by using Down's Elixir, as it removes the hoarseness and increases the power of the voice. Take small doses often. Price, 25c, 50c, and $1.00

A PRIZE Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All, of either sex, from first hour. The broad road to fortune opens before the workers, absolutely sure. Address TRUE & Co., Augusta, Maine

BAXTER'S MANDRAKE BITTERS

THE ONLY VEGETABLE CURE FOR

DYSPEPSIA,

Loss of Appetite, Indigestion, Sour Stomach, Habitual Costiveness, Sick Headache and Biliousness.

Price, 25. per bottle. Sold by all Druggists.

HAGYARD'S YELLOW OIL CURES RHEUMATISM

FREEMAN'S WORM POWDERS.

Are pleasant to take. Contain their own Purgative. Is a safe, sure, and *effectual destroyer of worms* in Children or Adults.



THOS. GRAHAM & Co.,

File Manufacturers

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150 FRONT STREET EAST

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FILES FOR SALE. FILES RE-CUT

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MANUFACTURERS OF

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LEATHER BELTING

70 King Street East, Toronto.

SPECIALTY:—Belting made from J. B. HOYT & Co's American Oak Tanned Leather. ☞Send for Price List and Discounts.

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GEORGE BRUSH

14 to 34 King and Queen Sts, MONTREAL,

MAKER OF

Steam Engines, Steam Boilers, Hoisting Engines, Steam Pumps,

CIRCULAR SAW MILLS, BARK MILLS, SHINGLE MILLS,

Water Wheels, Mill Gearing, Shafting, Hangers and Pullies,

Hand and Power Hoists for Warehouses &c., &c.

Also, Sole Manufacturer of BLAKE'S CHALLENGE STONE BREAKER.

AND AGENT FOR 1yL21

"Water's" Perfect Steam Engine Governor, and "Heald & Sisco's" Centrifugal Pumps

EXTRA HEAVY AMERICAN

Oak Tanned Leather Belting.

RUBBER BELTING, RUBBER PACKING, RUBBER HOSE, LINEN HOSE and COTTON HOSE.

☞A Full and Complete Stock always kept on hand. ☞WRITE FOR PRICES and DISCOUNTS.

We have the Largest and best equipped RUBBER FACTORY in the world for the manufacture of VULCANIZED INDIA RUBBER GOODS for Mechanical Purposes.

Our trade here has increased to such an enormous extent that in order to keep up with the demands, we have purchased from Major John Gray, M.P.P., Parkdale, the plot of ground situated on West Lodge Avenue, adjoining the Credit Valley, Toronto, Grey and Bruce, Northern and Grand Trunk Railways, for the erection thereon of a BRANCH RUBBER FACTORY, works to be in full operation January 1st, 1884.

THE GUTTA PERCHA AND RUBBER MANUFACTURING CO.

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WAREHOUSE:—10 and 12 King Street East,

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St. Gabriel Locks, - Montreal,

—MANUFACTURERS OF—

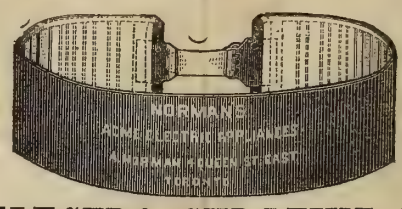
AXES and EDGE TOOLS

OF EVERY DESCRIPTION.

Old and Reliable, the Best Axes made in Canada.

12L20

Established 1874.



Established 1874.

NORMAN'S ELECTRO CURATIVE APPLIANCES

RELEIVE AND CURE

Spinal Complaints, General and Nervous Debility, Nervousness, Rheumatism, Gout, Liver, Kidney, Lung, Throat and Chest Complaints, Neuralgia, Bronchitis, Incipient Paralysis, Asthma, ciatica prains Consumption, leeplessness, Colds and Indigestion.

Ask for NORMAN'S ELECTRIC BELTS and you will be safe against imposition, for they will do their work well and are cheap at any price.

A. NORMAN, ESQ.—Dear Sir,—Please send me a waist belt. Enclosed find price. Head band I got for my wife has almost cured her of neuralgia. Yours truly,

C. L. TILLEY, WATERVILLE, N.B.

Numerous of such testimonials can be seen at my office, proving that they are doing good work and worthy the attention of all sufferers. Circulars free. No charge for consultation.

A. NORMAN, 4 Queen Street East, Toronto.

NORMAN'S ELECTRO CURATIVE TRUSS is the best in the world. Guaranteed to hold and be comfortable. Circular free. N.B.—Trusses for Rupture, best in America, and Electric Batteries always on hand at reasonable prices.



THE TRADE

Will always find a Large Stock of

SHANTY BLANKETS

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HORSE BLANKETS

AT LOWEST MILL PRICES.

JOHN MACDONALD & Co.

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A Magnificent Line of All Wool Fawn Blankets.

SAMPLE ORDER WILL HAVE OUR BEST ATTENTION.

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The William Hamilton Manufacturing Co'y

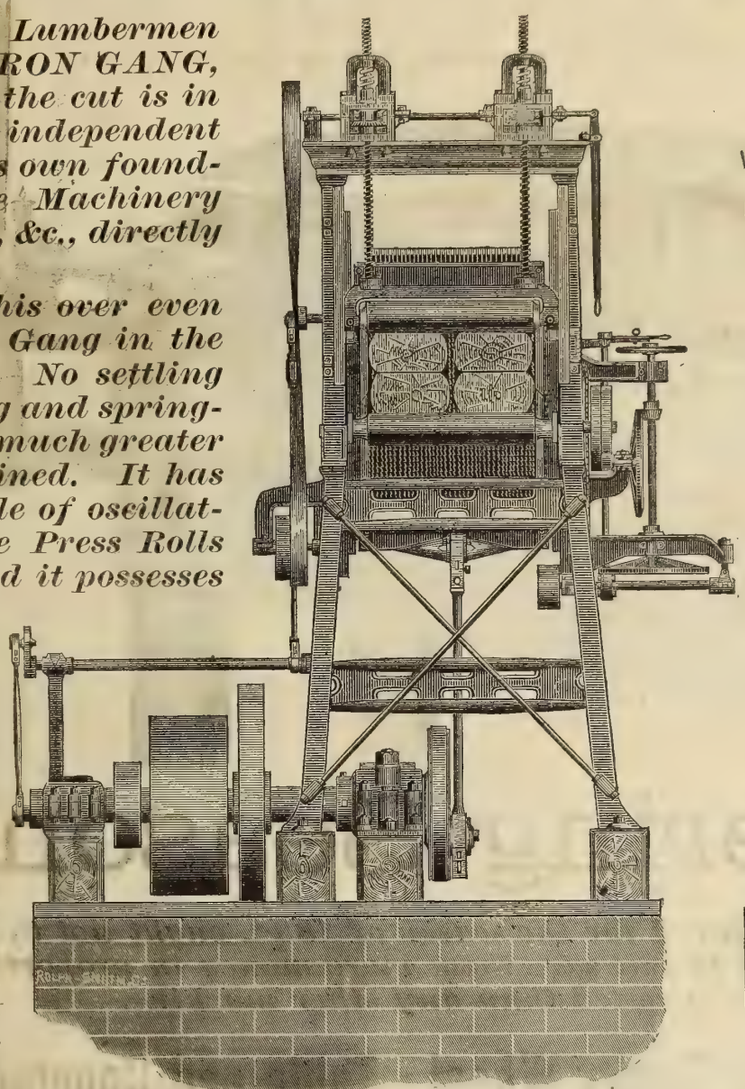
MANUFACTURERS OF (LIMITED,)

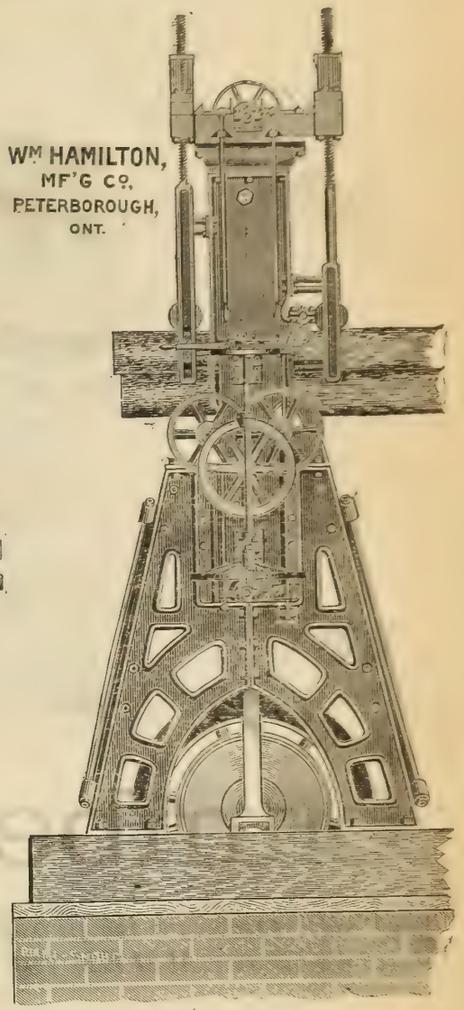
Saw Mills and General Machinery

PETERBOROUGH, - - - ONTARIO.

We introduce to the Lumbermen of Canada our New IRON GANG, which will be seen by the cut is in itself a complete and independent Machine, resting on its own foundations, having all the Machinery for operating, feeding, &c., directly attached.

The advantage of this over even a well built ordinary Gang in the mill frame is evident. No settling out of line, no yielding and springing of timber, while a much greater working speed is obtained. It has the most improved style of oscillating motion, it has the Press Rolls operated by power, and it possesses generally all the good features of best American Gangs, with heavier frame work and heavier shafting, all with a view to rapid, steady & correct working. A good look at one of these massive machines satisfies the sawmill man that they are in every way capable of continuously performing heavy duty throughout the season.

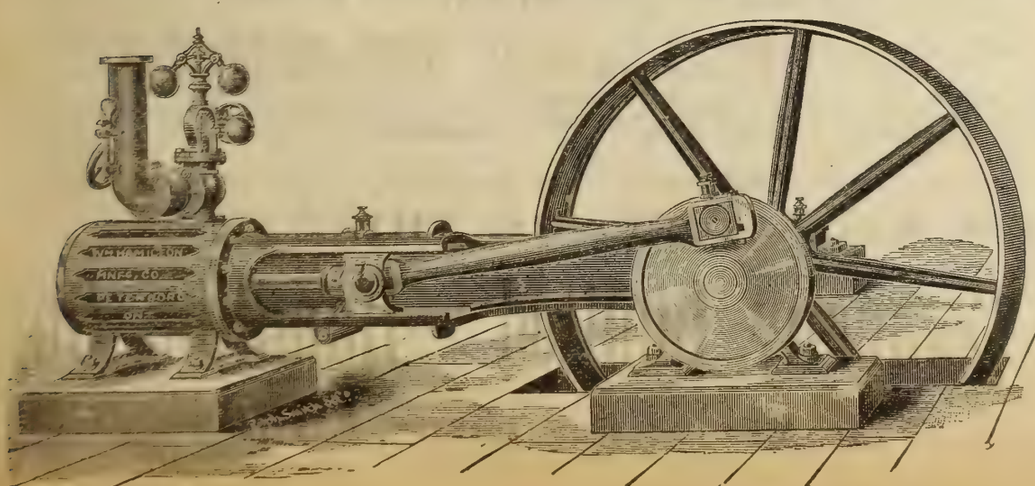




☞ *We make these Gangs one of our specialties and manufacture them of different sizes.*

—ALSO—

ENGINES AND BOILERS.



This cut represents our **SAW MILL ENGINE**, of which we make the following our Standard sizes, 12x16, 16x20, 18x24, and 24x30, built Strong and Substantial for Heavy Work. The Piston Rod, Cross-head Pin, and Wrist Pin, are made heavy and of the best steel; the Connecting Rod has solid ends and is tightened up by screw and wedge, avoiding all danger of keys getting out; the Slide Valve has a simple balance valve, requiring no attention from the Engineer, as it is self-adjusting. The Engine Shaft and Fly Wheel made very heavy. Belt Pulleys put on when required in place of Fly Wheel, and all regulated by the Judson Governor.

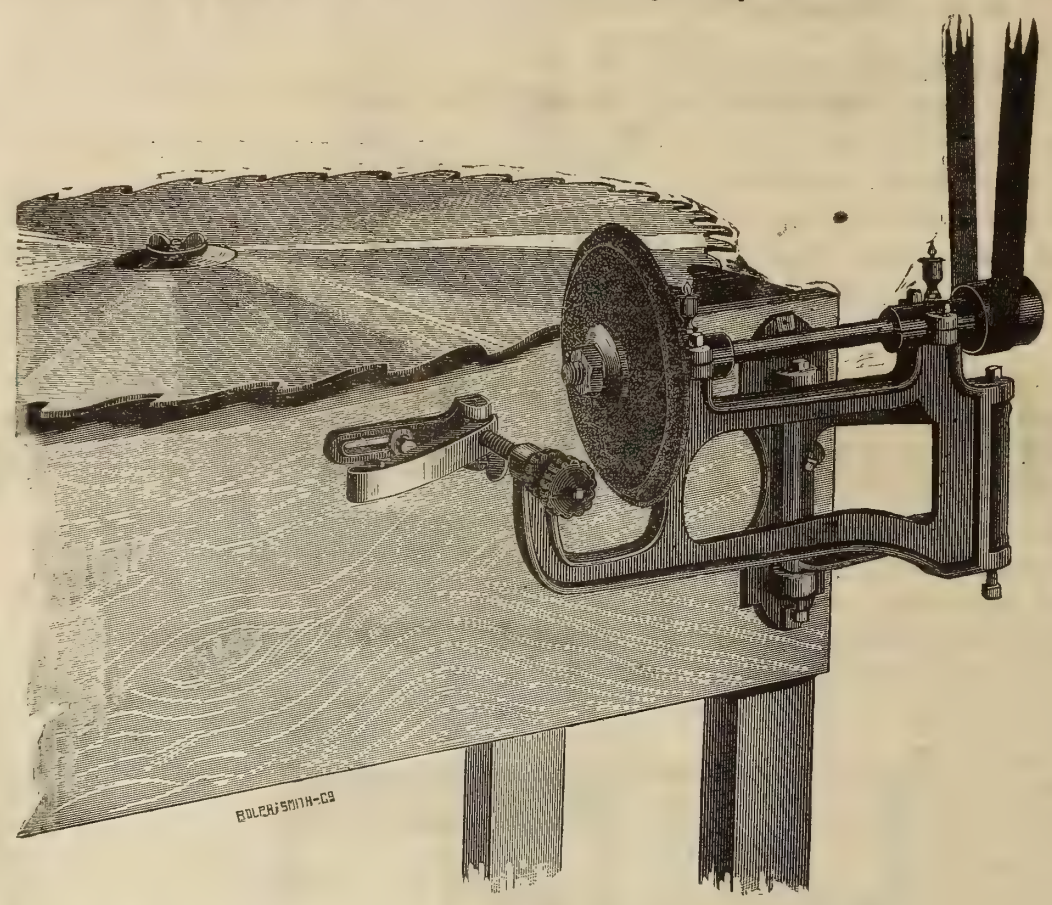
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SAW GUMMER and SHARPENER

The Handiest Machine for these purposes ever Invented.

Don't Heat!

Cheap!

Very Simple!



Accurate!

Works Fast!

Complete!

Lumbering Season, 1884

Saw Mill Owners in providing for the season of 1884, ought not to lose sight of ROGERS' SAW GUMMER for it will save them more money in proportion to the amount invested than any other machine.

Only $30, including Emery Wheel; Table and Countershaft, $10 extra.

A few of ROGERS' SAW GUMMERS were put on the market last season, and we quote some of the commendations received:

JAS. HADDEN, Foxmead, says:—
"Your machine is all I expected."

CHAS. ANDERSON, Anton Mills, says:—
"I have given it a good trial, and am well pleased with it. "I find it is one of the indispensables in a saw mill." * *

ROBT. R. WEIR, Orillia, writes:—
"It works like a charm, and is very accurate in its work."

CRONE & PATTON, Hoc Roc Mills, Gravenhurst, says:
"The Rogers' Saw Gummer purchased from you gives "good satisfaction, * * it cannot be beat."

D. DAVIDSON, Pentanguishene, writes:—
"We are well pleased with the Gummer."

W. W. BELDING, Wyevale, writes:—
"I have the Gummer running and it is giving good "satisfaction."

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Hart Emery Wheel Company, Limited - Hamilton, Ont.

☞Manufacturers of Hart's Celebrated Patent Wire Strengthened Emery and Corundum Wheels.

—IT WILL PAY YOU—

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2. It is devoted to the development and utilization of our forest wealth.
3. It furnishes complete and reliable quotations of prices of lumber in all the leading markets.
4. Its columns are filled with interesting reading matter, valuable alike to the land owner, manufacturer or dealer.
5. It costs only $2.00 per year to have it sent, post-paid, to any address in Canada, and no land owner, lumber dealer, manufacturer or individual in any way connected with timber industries, can afford to do without it.

☞TO ADVERTISERS.

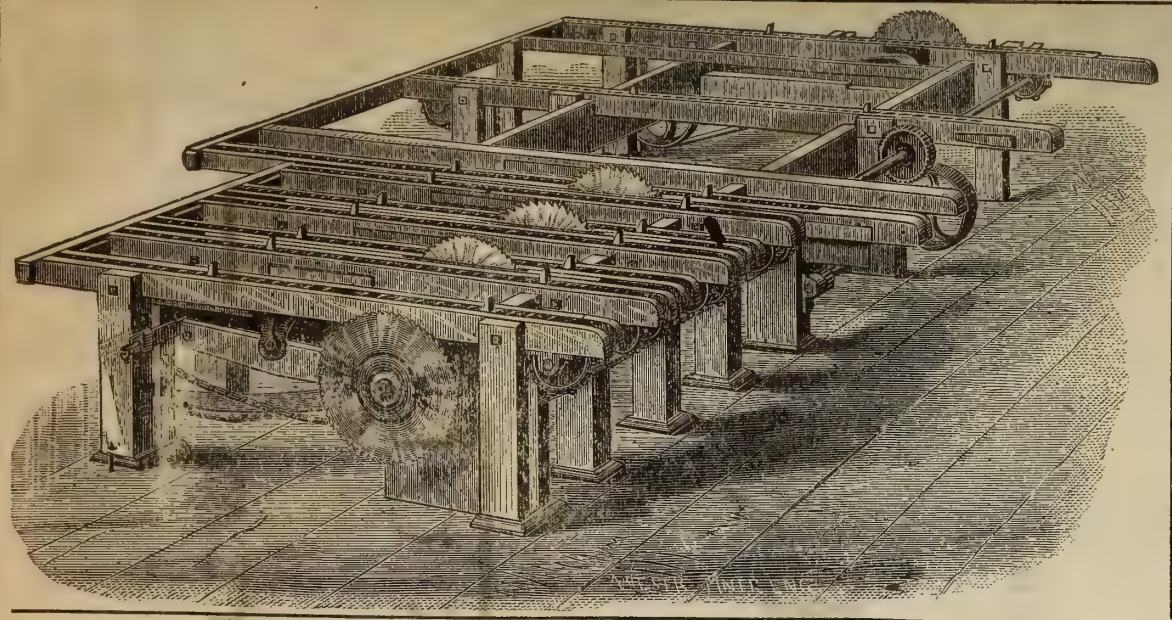
It has a circulation among saw mill owners, manufacturers, lumber and timber dealers and all classes connected with the timber business.

Examine the field, count the cost, and you will at once decide that the CANADA LUMBERMAN is the

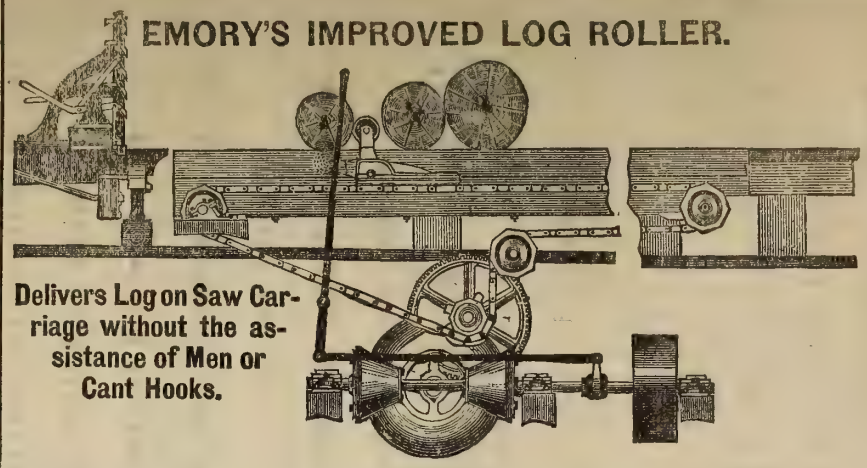
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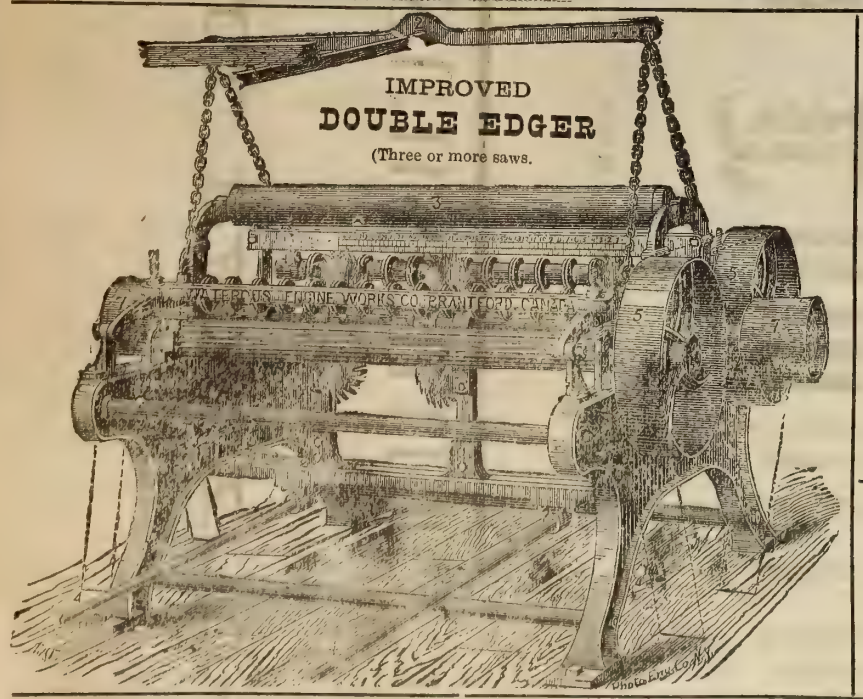
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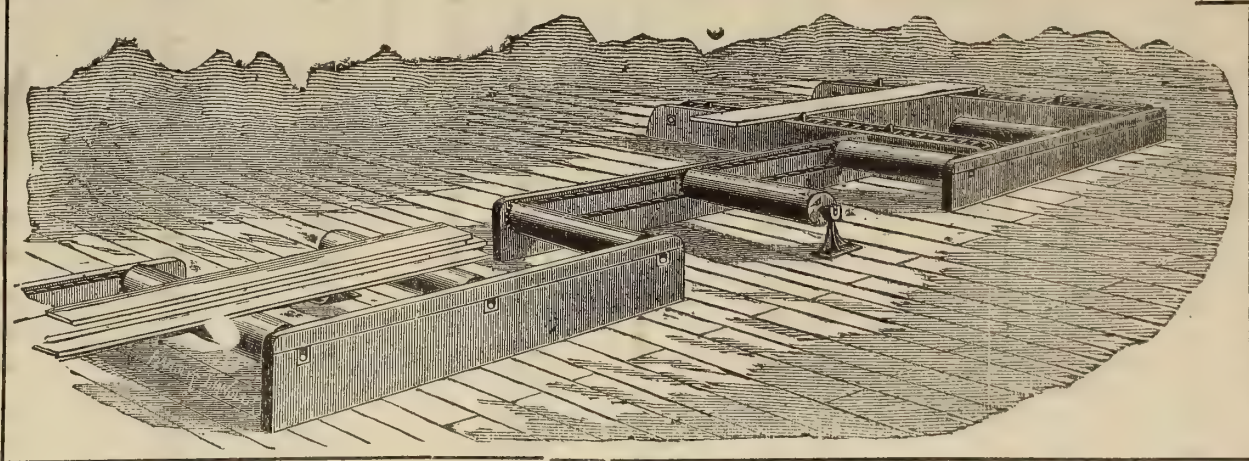
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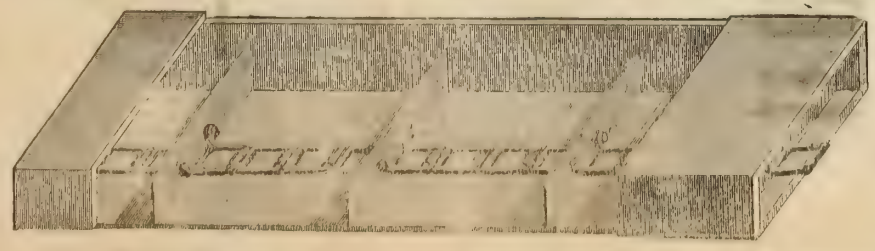
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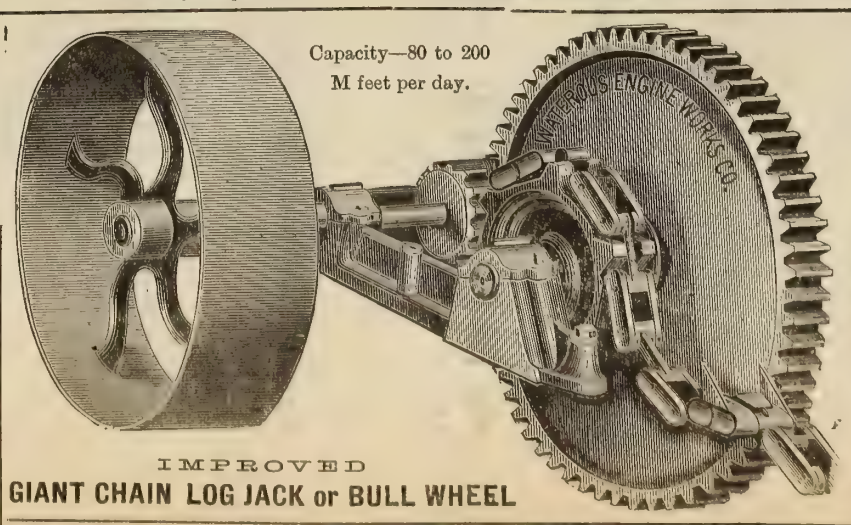
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Double Leather	4.52
22in. 6-ply Gandy	2.20
22in. 8-ply "	2.75
22in. 10-ply "	3.60
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GIANT LOG CHAIN

$1.40 to $1.50 per Foot.

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VOL. 4. PETEBOROUGH, ONT., MARCH 1, 1884. NO. 5.

THE ENGLISH MAHOGANY TRADE.

The *Builders' Weekly Reporter*, of London, dated January 18, has the following concerning the English fine wood market:—Edward Challoner & Co., of Liverpool, in their mahogany, etc., circular, state that there have not been any auction sales in the past fortnight, and the market is without change. The imports of St. Domingo veneer wood and logs of large to medium diameters have been on a limited scale for several months past. The stock is now very light, and suitable supplies would come to a good market. There is a good demand for well grown curls three feet and five feet long, but all other descriptions have been dull of sale of late at low figures. Of Cuba the stock is light, and early supplies of good wood, of desirable dimensions, will meet with ready sale. The stock of Honduras now on hand, say 906 logs and curls, will be offered by auction and will be, no doubt, promptly disposed of, as there have not been any public sales of Honduras wood since December 7, when there was a very good demand at full prices for straight sound, well-made logs. As the stock of Mexican is only about 400 tons, chiefly of small sizes, there is a good opening for supplies of larger dimensions, which are wanted, and will command very good prices. Cedar imports from Honduras and Mexico have been light in the past few weeks, therefore some improvement in value may be shortly expected. Pencil cedar has been in moderate request. The demand for rosewood has been very dull for both Bahai and Qio. Of Honduras the stock is exhausted. Belize wood has been inquired for. Zebrawood is dull of sale.

SOUTHERN PINE FORESTS.

The census reports of the amount of standing pine in the United States, and of the immense amounts annually cut in the Northwest, that were perceptibly thinning out the forests in that section, succeeded, at least, in arousing the attention of the country to the necessity of forest preservation, and, also in developing to an unnecessary degree the fear of forest denudation, so far as the pine forests of the South are concerned. We say to an unnecessary degree, because these forests possess favorable characteristics, which are not applicable to those of the Northwest. There, the undergrowth is so heavy it is of itself dangerous to the preservation of the timber fit for manufacturing, and there are strenuous advocates of the claim that while it would be preferable to thin the forests out gradually, and leave the smaller trees standing for a few years; yet, it is recognized to a great extent a necessity to cut every merchantable tree, in order to preserve them from the devasting effects of forest fires that often sweep over immense districts before they are either controlled or die out from lack of fuel to feed on. This is their natural condition. To attempt to carry out the idea of forest preservation by cutting only the larger timber, is by many, considered sheer folly, as every tree felled, but increases that much the amount of combustible material, and to that extent increases the danger of destruction by fire.

With the pine forests of the Southern States this danger to standing trees does not exist, except to a limited extent. With the greater portion, it is known that among the pines little or no undergrowth exists; not enough at any rate to endanger the life of the trees from forest fires. This is well shown in the almost harmless custom prevalent throughout the Southern States, of, each spring, burning off the dead leaves and grass, among the pines, to allow the young grass to spring up so that it will furnish an early pasture for the sheep and cattle.

It may be said then, that these forests possess features which will permit, to the highest degree, the application of the European idea of forest preservation, that permits the felling of a certain number of trees only, to a given acre, and those only that have attained certain dimensions. Excepting in certain localities; in the more thickly settled sections of the country, and immediately along the older worked streams, no evidence of the scarcity of pine for manufacturing needs is preceptible to anything like a dangerous degree. Yet, it would be well enough if some plan of forest preservation could be inaugurated and successfully applied; as the wealth and prosperity of large sections are immediately dependent on the conversion of timber into lumber; and they will be so dependent for a series of years; at least until their population has increased to the extent making the land valuable for cultivation.

It has been demonstrated, by experience, that in twenty-five years the yellow pine will attain a growth sufficiently large to permit its being cut for lumber. It has also been demonstrated that the culling of the best trees from the forest does not endanger those left standing. On the contrary, it has been shown that the standing trees are benefitted; that the thinning out of forests, forces the growth of smaller trees, and causes them to attain dimensions superior to the largest trees first felled. Sections in this state and in Mississippi, Alabama and Georgia, thinned out eight and ten years ago in this manner, have been again brought into requisition, and first-class logs obtained from trees that had previously been left standing as unfit for manufacturing.

With these facts in view, it can be seen at a glance, that in their pine forests, the Southern States possess sources of wealth which will remain with them time out of mind if properly preserved from possible exhaustion; a fear which is of little present consequence; and one which it will not be necessary to entertain for many years to come; as at present the combined annual cut of the nine Southern State, with their immense forests of pine, does not much exceed one half the yearly cut of the State of Michigan alone.—*American Lumberman.*

LUMBER WASTES.

Taking into consideration the rapidity with which our lumber lands are seemingly being denuded of heavy timber growths, it is plainly a matter of no insignificant importance that some means be adopted to make a tree go as far as possible. That a large proportion is left to cumber the premises, is proven by the perpetual fires going on in some localities to get rid of the sawdust, slabs, etc., that accumulate so rapidly around all mills. Chemists tell us that all this offal can be utilized and made into a paying commodity if treated properly and attended to in time. Let us examine and see.

With valuable timber, such as rosewood, walnut, mahogany, etc., this offal could be gathered and submitted to a process by which it could be softened without destroying the fibre, and afterward submitted to hydraulic pressure and material of any required size produced; this, in turn, again sawed and dressed, is found to take a high polish, and, excepting its tensive strength, is equal in every respect to the lumber from the body of the tree, and in some respects would be preferable; as, for instance, it would stand the most intense heat without warping, shrinking or affecting its finish. Furniture, and all articles not subjected to overstrain, would present a most homogeneous structure, while for coffins, burial-caskets, inside finish for dwellings, and the like, it would last nearly forever, inasmuch as the elements of decomposition would all be removed and nothing but the mineral elements of the wood remain. But in this article we wish to discuss the wastes of the cheaper woods, leaving the subject of artificial wood for subsequent discussion, as by request of Mr. Morgan. Wood of any kind indigenous to the United States can, we are sure, be rendered plastic as in making paper, then restored to its original hardness and shape, if need be, without detracting any of its properties save that of elasticity, which, of course, would be destroyed.

We will assume that out of an ordinary tree the lumberman gets 75 per cent. of lumber which he sells; now the remaining 25 per cent. a very low estimate, virtually amounts to a nuisance, and the question how to remove it is paramount; in many instances fire is resorted to, but this is both dangerous and unnecessary, as we will show.

All wood contains 65 percent. of volatile matters, the remainder being carbon. We have taken pains to make a chemical test of a sample of oak, and found this sixty-five per cent of light or volatile matter to be divided into creosote, tar, rosin, pitch, paraffine, alcohol and acetic acid; whereupon we made no little inquiry as to the prices abtainable for these products, and found ready buyers in Chicago for the acetate, in Buffalo, N. Y., for the alcohol, in New York city for the pitch, tar, etc., in St. Louis for the creosote, leaving the carbon, a matter of 35 per cent., worth, I am told, 63 cents per bushel, or 2 cents per pound in Peoria, for filtering purposes. With these prices, two tons of wood, is worth nearly as much as the rest of the tree before being sawed; in other words, the per cent, of alcohol, one, we obtained at 65 cents per gallon, the acetate of lime 650 pounds per cord at two and one-half cents per pound as offered, the creosote and other by-products, all put together, give a grand total of $11 per cord for wood; then the charcoal, amounting to as much more, makes a cord of wood worth say $22 per cord. At this price we will give figures approximating the cost of manufacture. Calling the wood nothing, as it is no more trouble to throw this refuse in one place than another, and the appliances of manufacture are of a character that they could be arranged to take all wastes and sawdust as coming from the mill, then labor at $2 per day, two men, machinery, steam, etc., $10 per day; packages, etc., for storing and shipping, $10 per day; an ordinary mill will have say ten cords of waste per day, and no great mathematician is required to give the profits, and even allowing one-half loss for the visions of a chemist, we still have a profit that seems marvelous.

It looks to us like a wanton destruction of lumber material to see so much refuse rotting and burning away, when if utilized in the manner suggested much good could come of it. In the matter of preserving timber alone, this subject is well worth the attention of owners of timber tracts and saw mills. The crude product could be used for preserving bridge timbers, railroad crossties, fences, buildings, and the like, and would require no extra manipulation save to burn these wastes and condense the smoke, a simple process, and one which anyone can understand.

We have investigated the cost of entire works of this kind but little, and of course would depend altogether on the amount of waste desired to consume in the process, but for a capacity of reducing ten cords offal in 24 hours the cost would not exceed as many thousand dollars, and if a wood or meat preservative was all that was to be made the cost would be much less. —*Chicago Lumber Trade Journal.*

F. S. STERLING & Co., of Monroe, Michigan, handled 18,000 telegraph poles last year and expect to deliver 100,000 this season, having now on hand contracts for 80,000 poles. They are trying to make Monroe the largest distributing depot for telegraph poles in the United States.

WASTE OF THE WORLD'S FORESTS.

When the forests of such a country as Cyprus were destroyed, said Thistleton Dyer, in a discussion in the British Society of Arts, it was like a burned cinder. Many of the West Indian Islands are in much the same condition, and the rate with which the destruction takes place when once commenced is almost incredible. In the Island of Mauritius, in 1835, about three-fourths of the soil was in a condition of primeval forest, viz., 300,000 acres; in 1870 the acreage of woods was reduced to 70,000; and in the next year, when an exact survey was made by Indian forest officer, he stated that the only forest worth speaking about was 35,000 acres. Sir William Gregory says that in Ceylon, the eye, looking from the top of a mountain in the centre of the island ranged in every direction over an unbroken extent of forest. Six years later the whole forest had disappeared. The denudation of the forests is accompanied by a deterioration in the soil; and the Rev. R. Abbay, who went to Ceylon on the Eclipse expedition, calculated, from the percentage of solid matter in a stream, that one-third of an inch per annum was being washed away from the cultivated surface of the island. In some colonies the timber was being destroyed at such a rate as would lead to economic difficulties. In Jamacia, nearly all the timber required for building purpose already has to be imported. In New Bruniswick, the hemlock-spruce, is rapidly disappearing, one manufacturer in Boiestown using the bark of 100,000 trees every year for tanning. In Demerara, one of the most important and valuable trees, the greenheart, is in a fair way of being exterminated. They actually cut down saplings to make rollers on which to roll the large trunks. In New Zealand, Captain Walker says he fears that the present generation will see the extermination of the Kauri pine, one of the most important trees. All these facts show that this a most urgent question, which at no distant date will have to be vigorously dealt with.

HOW TO TREAT SUDDEN WOUNDS

The subject of one of the lectures by the Society for instruction in First Aid to the Inured, delivered by Dr. D. L. Woodbridge, of New York, was "What to do in case of a sudden wound when a surgeon is not a haud."

As parts of it may be useful to our readers we take the following from the *Scientific American*:

An inexperienced person would naturally close the lips of the wound as quickly as possible, and apply a bandage. If the wound is bleeding freely, but no artery is spouting blood, the first thing to be done is to wash it with water at an ordinary temperature. To every pint of water add either five grains of corrosive sublimate or two and a half teaspoonfuls of carbolic acid. If the acid is used add two tablespoonfuls of glycerine, to prevent its irritating the wound. If there is neither of these articles in the house, add four teaspoonfuls of borax to the water. Wash the wound, close it, and apply a compress of a folded square of cotton or linen. Wet it in the solution used for washing the wound, and bandage down quickly and firmly. If the bleeding is profuse, a sponge dipped in very hot water and wrung out in cloth should be applied as quickly as possible. If this is not available, use ice, or cloths wrung out in ice water. If a large vain or artery is spouting it must be stopped at once by compression. This may be done by a rubber tube wound around the arm tightly above the elbow or above the knee, where the pulse is felt to beat; or an improvised tourniquet may be used. A hard apple or a stone is placed in a folded handkerchief, and rolled firmly in place.

This bandage is then placed so that the hard object rests on the point where the artery beats, and is tied loosely around the arm. A stick is then thrust through the loose bandage and turned till the flow of blood ceases.

WARPING.

It is said that the wood on the north side of a tree will not warp as much as that from the south side; and that if trees are sawn in planes that run east and west, as the tree stood, will warp less than if cut in the opposite direction. However this may be, says a writer in the *Journal of Progress*, it is certain that the tendency to warp when sawn into boards is much greater in green than in dry wood, and that the convex side of the curve is always toward the heart. This warping, due to unequal shrinkage, and to the more open texture of external portion of the tree is not found to occur in the middle plank or board of the log, excepting as it may in slight degree reduce the breadth. The quality of not warping, which is in many cases absolutely indispensable for certain uses, as for example in the sounding-boards of pianos, is secured in the case of spruce timber by first quartering the logs and then sawing them with the angle downward. It is then sawn into boards very nearly at right angles with the lines of annual growth, and small triangular strips must be taken off to make the boards square-edged, but qualities of stability and strength are secured that could not otherwise be gained.

LARGEST LOAD OF LOGS.

The Oscoda Salt and Lumber Company can now undoubtedly brag of hauling the largest load of rogs which has ever been piled on a pair of bobs. The *Northern Mail*, published at Mio, in publishing the facts says:—

Seven pieces of round timber, scaling together over 26,000 feet, had been skidded three miles from the river, and from the immense size of the pieces (two of them scaling over 6,000 feet) and from the fact that it was contemplated to take the whole skidway to the river at a single load, the logs in question have excited quite an amount of interest. Quite an amount of light snow had fallen during the night, but the road was true as a die, the weather just warm enough to favor the undertaking, and after a snow plough had gone down nothing more could have been desired. A pair of bob sleighs, which had been in use on the road all winter, were brought out, provided with new bunks made especially for the trip, and the load rolled on. Three pieces were loaded upon the bunks, the fourth and fifth logs on top of these, and the sixth above the last two, when it was found that there had been 26,123 feet of logs loaded, and no room left for the seventh log.

The following is a memorandum of the scale:

Length in feet.	*Diam. at centre in inches.*	*No. of feet.*
57	35	3,423
86	27	2,842
67	30	2,830
84	38	6,066
72	36	4,608
88	38	6,354
Total		26,123

The load then started on its three-mile trip, and was drawn by a single span of horses. Not a stop was made on the whole route, the team keeping a stiff trot over a greater part of the distance after getting under headway. The amount of round timber in the load estimated by the usual methods, weighs over 70 tons.—*Lumberman's Gazette.*

OLD PINE.

A Milford, Pa., correspondent writes to the Cincinnati *Commercial Gazette*: M. V. C. Shoemaker, of Dingman's, has one of the newest houses in Pike County, but the flooring is probably the oldest manufactured lumber in the United States in actual use for a similar purpose. It is made of yellow pine boards an inch and a half thick and nearly two feet wide. The trees from which they were cut were felled along the Delaware at Dingman's 150 years ago. The boards were sawed out by hand by ancestors of Mr. Shoemaker, and used to floor a stone house they erected in 1724. This building also served as a fort, those early settlers being continually exposed to Indian raids. The house was torn down to make room for the new dwelling. The timbers used in it were nearly all sound. The floor boards were so well preserved that no sounder ones could be found in a lumber yard. About 100 pounds of wrought iron nails four inches in length were taken from the timbers. These must have been forged on the spot, as there was no place nearer than the Minisink settlements in New York state, where they could be obtained. Yellow pine, now entirely extinct in this region, was evidently cheap and common in this country as late as 50 years ago, for in tearing away the porch of the Crissman house in this village a few days ago, which was built about a century ago, the ceiling of the upper part was found to be of yellow pine boards an inch thick and over a foot wide. They were as sound as when put in. To inquire at a lumber yard to-day for a load of such lumber would frighten the dealer into fits.

PRICES OF TIMBER IN ENGLAND.

The following prices may be considered the present obtainable ones for the various kinds of standing timber, and based on its growing within four or five miles of a central railway station within a 10s. railway rate of the manufacturing districts. If the timber is growing in an unfavorable position for removal, the price must be reduced in proportion, or if in small lots in a country district, where haulers have to be brought from a distance, the expense of cartage is necessarily heavier. Specially selected lots in favorable situations by themselves may command higher prices.

Oak, selected timber	1s. 9d.	to	2s.
Do., second class	1s.	"	1s. 6d.
Ash, selected timber	1s. 6d.	"	1s. 9d.
Do., small second class	1s.	"	1s. 3d.
Elm	6d.	"	7d.
Beech	5d.	"	7d.
Poplar, large	5d.	"	6d.
Do., small	3d.	"	4d.
Larch, large	9d.	"	11d.
Do., small	6d.	"	8d.
Sycamore, good and large	1s. 6d.	"	2s.
Do. small	6d.	"	9d.
Scotch fir	4d.	"	6d.
Spruce	3d.	"	5d.
Alder	5d.	"	7d.
Horse chestnut	5d.	"	7d.
Willow	5d	"	7d.
Spanish chestnut	6d.	"	10d.
Walnut	6d.	"	1s.
Lime	6d.	"	10d.

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, Feb. 19, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., N. W., Washington, D. C.:—

Band fastening—W. W. Stewart, Brooklyn, New York.

Gearing (changeable speed)—S. W. Martin, Sprinfied, Ohio.

Lathe for turning eccentric or polygonal forms—W. H. Lenhart, Defiance Ohio.

Lathes (cutter-head for handle turning)—J. Westcott, Union City, Pa.

Lubricator—A Bradford, deceased (2 patents) W. W. Blackman administrator and assignor of 5-16 to T. C. Wiggins, Brooklyn, A. R. Smith, New Brighton, and A. S. Comstock, New York.

Lumber-drier—D. Goodwille, Oak Park, Illinois.

Match splints (machine for making)—G. Sebold, Carlsruhe, Germany.

Pane (bench)—2 patents—A. T. Goldsborough, Washington, D. C.

Plane-gage—J. A. Trant, New Britain, Conn.

Pulp (manufacture of articles from wood)—W. H. & W. S. Ravencroft, Parkersburg, W. Va.

Spokes (machine for milling off ends of wheel) J. Barnet, Lafayette, Ind.

Spoke stave—A. D. Goodell, assignor to Millers Falls Co., Millers Falls, Mass.

Wood-pressing compound—H. C. Dorr, San Francisco, Cal.

Built Up Wood.

Several thin sheets of wood—they are called veneers, though they are sometimes an eighth of an inch thick—are glued one upon another, with the grain of each sheet crossing the grain of the sheet next above or below it at right angles; and, when the whole complex fabric has lost all power of resistance though being almost saturated with steaming glue, it is pressed into an almost homogeneous board without any cleavage whatever, and so without possibility of splitting. Every sort of wood, of course, can be built up. The inside layers can be cheap and the outside choice. No matter whether the different sheets naturally swell and shrink evenly together. They are too thin to exert much force. Their separate identities are lost in the common and overmastering union. The advantages of economy, strength in every direction, and immunity from cracking are enough to give the fabric the readiest possible acceptance for whatever uses it may be adapted. It is already in use for broad, flat surfaces in cabinet work, especially where strength or permanence is wanted. It already competes with canvas for the use of artists, and with binders' board for book covers. Its availability for any purpose appears to be a matter of expense and skill—never of quality. That it will be adapted to many uses not now thought of is as sure as the inventive fertility of our mechanics.

CALIFORNIA REDWOOD.

Mr. E. L. Allen, secretary of the Redwood Association, San Francisco, furnishes the *Northwestern Lumberman* the following figures, representing the output of sawed lumber of the redwood mills of California for 1883:—

DEL NORTE COUNTY.	
Redwood, 3 mills	4,262,740
Pine	7,848,134
Total	12,140,874
HUMBOLDT COUNTY.	
Redwood, 14 mills	79,815,646
Pine	3,000,000
Total	82,815,646
MENDOCINO COUNTY.	
Redwood, 21 mills	77,905,717
Pine	15,225,000
Total	93,130,717
SONOMA COUNTY.	
Redwood, 7 mills	18,948,459
Pine	3,500,000
Total	22,448,459
SAN CRUZ COUNTY.	
Redwood, 19 mills	37,500,000
Pine	2,500,000
Total	40,000,000
Grand Total	250,535,696

QUEBEC.

A despatch dated Feb. 16, says:—A heavy suit has been instituted by the Merchants Bank against a westesn timber firm in which about a quarter of a million is said to be invol ved. A number of our leading timber merchchants have been examined in the matter. The real cause of the action is not generally known, but is believed to relate to advances by the bank, the rate at which the timber was sold in England by the western firm's Quebec agent being an important issue.

What a Woman Says.

Mine Run Furnace, Va., Jan. 31, 1884.

E. ST. JOHN, G. T. & P. A.,

CHICAGO, ILL.

Your valuable Cook Book came to hand, for which accept my thanks. It's a treasure, for its recipes are plain, and the book is well got up; its typographical and general make up speaks well for your department in doing so much for the "Women of America." May your Road be as successful as every women will be who follows your Cook Book, and every man who eats thereafter. Yours Truly,

MRS. M. R. KARSTERS.

This beautiful book contains 128 pages with illuminated covers. Sent on receipt of 10 cents in stamps or cash. Address,

E. ST. JOHN, G. T. & P. A.,
C. R. I. & P. R'y, Chicago, Ill.

THE London trade in wood does not appear to be on the increase, as the dock deliveries have been rather declining than increasing for the last two years. In 1880 they amounted at the year's end to 222,446 standards sawn and planed and in

1881 to 248,714 stds.
1882 " 235,621 "
1883 " 224,903 "

by which we see that a less amount of business was done at the timber docks each of the two last years, than in that preceding. It either must be therefore that the timber trade of the port is less, or that the docks do less of it than they used to do.

This Space Belongs to the

Machinery Supply Association,

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THOS. GRAHAM & Co.,

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150 FRONT STREET EAST

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FILES FOR SALE. FILES RE-CUT

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MANUFACTURERS OF

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LEATHER BELTING

70 King Street East, Toronto.

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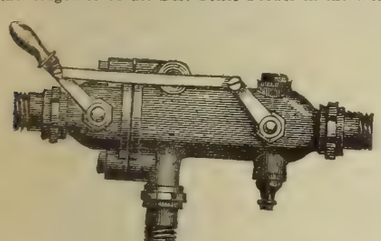
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Montreal Brass Works,

St. Peter and Craig Streets, Montreal.

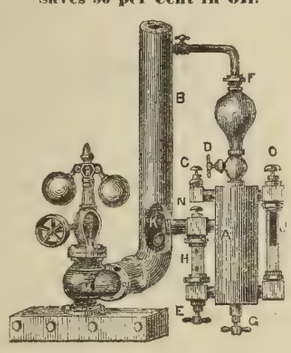
THE KORTING INJECTOR

Acknowledged to be the Best Boiler Feeder in the World.



Will lift 20 feet, and take water at 150 degrees. Only one handle to start and stop. No valve to regulate. CHEAPER than any other Injector in the market. Also, PATENT EJECTORS for conveying Water or Liquids. CIRCULARS ON APPLICATION.

The Continuous Feed Lubricator Saves 50 per Cent in Oil.





Lumber Drivers' Calks

TEMPERED IN OIL.

25 BALL and 5 HEEL to Set

The Calks are now used by all the principal Drivers in Maine and New Brunswick.

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FOR SALE BY

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Dealers in Lumber and Mill Supplies.

ST. JOHN, N. B.

Samples sent by mail on application.

MECHANICS WHO RISE.

There is a large sized nugget of truth in this from Dr. J. M. Buckly's series of "Letters to Young Men," in the New York *Christian Advocate*:—

"Benjamin Franklin told the truth when he said that the best knowledge a man could give his son was the mastery of a good trade. Such a man is cosmopolitan. He can make himself useful anywhere, and he can live anywhere. If it should not be necessary always to work at his trade, he feels the ability wherein to support himself. . . Between the average mechanic and the great manufacturer or merchant prince, great numbers can be found who began as mechanics and who have taken positions by their mechanical skill fully equal to that of the average merchant and far superior that of most clerks and professional men.

Always have in view rising above the position of a mere journeyman. Look at things from a broad, business point of view. Consider that some day you may not be a journeyman, and try to study the relations of capital to labor, and to master the principles of business, so that if you should even form a partnership with a business man, you will not be at his mercy, and so that, if you choose, you may at any time enter upon business for yourself, and not fritter away your life in a vain effort to to overcome by mechanical skill financial obstacles."

PROOF POSITIVE.—If you suffer from pain in the region of the shoulders, headache, irregular bowels, faintness, sick stomach, variable appetite, bad taste in the mouth and complexion, your liver and billary organs are seriously affected, and Burdock Blood Bitters is the prompt and certain remedy.

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Augusta, Maine.

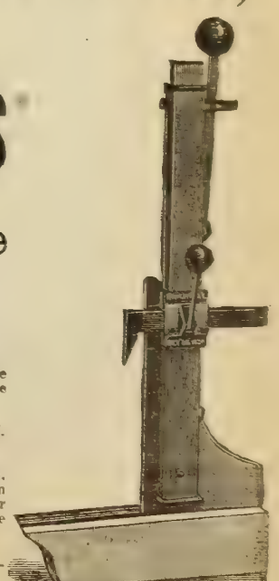


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SAW MILL DOGS



The Sawyer's Favorite

For Holding Logs upon a Saw Mill Carriage while being Sawed into Lumber.

MISSISSIPPI, June 7th, 1883.

HUGH GIBSON, ESQ.,—Your Patent Excelsior Mill Dogs give entire satisfaction, and is certainly up to your recommendation. They are the best Mill Dog in the market. I am very much pleased with them.

Yours Respectfully,
PETER McLARREN.

BERKLEY, April 20th, 1883.

HUGH GIBSON,—SIR,—The Dogs I bought of you give satisfaction. They beat any Dog that I ever saw for ripping or edging lumber on carriages. They are just the thing for scantling. I would not take $50 for them to-day and have to wait for another pair to come from you, because I believe they make two dollars a day for me.

Yours truly,
2u1y GEO. S. BROWN, JR.

Manufactured by HUGH GIBSON, CHATHAM. EXCELSIOR DOG.

THE COCOANUT TREE.

Alfred Trumble entertainingly describes in the *American Agriculturst* a tour he has been making among the cocoanut growers in the tropics:

Straight up, for 50 feet, an ash-grey stem, banded with many indented rings, springs from the yellow sand. Far up, the sea breeze rustles a feathered crown of sweeping fern-like fronds, which wave against the sky like so many gigantic plumes. As we looked up in delight at this, the first cocoanut tree that we had ever seen, a sharp snap sounded overhead, and we dodged just in time to save our head from a large nut, which, breaking from its stem, had fallen and now rolled at our feet.

On a schooner bound to Aspinwall, we had run ashore during the night on one of the many coral reefs which wall the Central American coast from the deep Caribbean. By day, the islet would have been visible enough, with its great tree standing a warning beacon, tall and solitary. But the night had been dark, and we had made the closer acquaintance of the signal tree. We were carried, a couple of days later to St. Andrews, by a native fishing boat, which had been on a cruise after turtles, and which we signalled. There we saw the cocoanut in all its glory. St. Andrews is the chief supply port of the cocoanut in the American tropics. The nuts are brought north from all along the coast and from many of the West India islands, but St. Andrews is the great producing centre. The island is given over entirely to cocoanut growing. The nuts are its only currency, and from them many of the islanders have grown rich, as riches go in that primitive society. The crop, which was originally planted by nature, has since been improved by man, and now St. Andrews is said to produce the best cocoanuts in the world.

The foliage of the cocoanut palm is inexpressibly beautiful. Imagine from 15 to 20 gigantic ferns, dark green in color and with tough-fibred, sharp-pointed and highly-polished leaves or fronds. Bunch these at the end of a towering pole, and set them swaying and clashing in the breeze and flashing the sun from their polished surfaces, and you can form an idea of the tree.

The cocoanut makes its first appearance above ground with a delicate fern-like shoot. Another and another follows until the growing plant looks like a gigantic fern. Then a couple of leaves turn yellow, brown, and bright russet, and drop off, and you see a foot of stem between the remaining leaves and the ground. It takes from seven to ten years to send the tree up to a height of 20 feet. Then it begins to bear. The first crop of nuts is from 15 to 25 a year. When it is in full bearing a tree will make an annual yield of from 80 to 100 nuts, or even more.

The cocoanut propagates with amazing readiness. A nut washed ashore on some tropical beach is rolled up by the tide. Then the rain rots the husk, and the winds bury it in the sand, and next year a cocoanut palm is springing from the arid ground. The trees protect the tropical beaches from the action of the tides. Their roots spread out and interlace into a tough and matlike network, which opposes a wall of vigorous resistance to the gnawing and encroachments of the sea.

Everyone knows what the ordinary cocoanut of commerce looks like. In nature, however, it is enclosed by a thick, tough husk, fibrous on the inside, and from two to three inches thick, but covered without with a smooth, light-green rind. This husk is either split with a blow of a heavy wood-knife, and torn from the nut, or else the nut is husked by splitting the rind on an iron blade set in a log. It is from the fibre of the husk that the mats and cordage of commerce are made. The fibre is rot-proof in water, and in tropical ships is popular in the form of coir rope. The uses of the cocoanut in all forms are manifold. The value of the fruit for food is its best recommendation. The meat of the nut is macerated and soaked in water, and pressed, when it yields a rich oil, very pleasant in flavor at first, but soon growing rancid on exposure. This oil is also obtained by boiling the meat, and furnishes a stearine for candles. It is used pure for burning and in soap making. Soap made from cocoanut oil forms a lather in salt water. Mixed with resin, the oil makes a valuable pitch for caulking. It is largely used in tropical cookery, and on holidays many of the aborigines and blacks besmear themselves with it as if it were a perfume. The meat from which the oil is obtained is savory, but, being rich in fat, is very indigestible.

A green cocoanut contains only a milky fluid, which gradually consolidates on the inside of the shell. When the nut becomes over-ripe on the tree, only a watery milk is left in the shell. This rapidly sours, when the nut becomes worthless. If it is picked, however, before it grows too old, the milk preserves it sweetness.

The leaves of the cocoanut palm furnish the most durable thatch known in the topics. They are also extensively worked into mats, screens, baskets, boxes and so on. When dampened and exposed to the sun until the green portion rots, the fibre is carded and woven into coarse cloth. The wood is fine-grained and hard, and is used in ornamental work under the name of porcupine wood. The fibrous heart of the old stems is made into cordage. The husk is used for burning and makes an excellent scrubbing brush.

A NEW USE FOR SAWDUST.

The Deseronto, Ont., *Herald* states that patents have been issued to E. W. Rathbun and George Walker for blocks of consolidated sawdust and tar, mixed in certain proportions, for the manufacture of gas for light and fuel. The gentlemen referred to are one of the proprietors and the chemist of the Rathbun Company, of Deseronto, near the foot of Lake Ontario, that cuts about 50,000,000 feet of lumber a year. This company has been for sometime profitably extracting acids from sawdust, and the present invention is one of the results of the practical information they have acquired in this way. It has long been know that gas of good quality, in moderate quantities, could be obtained by the distillation of wood, but it has only been demonstrated within a few years, that by heating wood to very high temperatures enormous quantities of gas could be produced as compared with coal. Taking this hint it is proposed to manufacture gas from sawdust and mill refuse. While on the manufacturing scale only about 9,000 to 10,000 cubic feet of gas are obtained from a ton of coal, it is not unusual to obtain 30,000 cubic feet from the same weight of wood. By this recent invention a gas producing material is obtained from sawdust from which 40,000 feet of gas of any desired illuminating power may be obtained per ton. The invention referred to consists in mixing tar, while in a fluid state from heat, with sawdust, and after thoroughly mixing these ingredients immediately consolidating them in a powerful machine capable of effecting so close a union between them as to render their separation during roasting impossible. The difference in cost according to Mr. Walker's calculation, between coal and wood gas is enormous, and he adds that with very few changes coal gas works can be used for sawdust blocks. The cost of coal gas he estimates at from 50 to 75 cents per 1,000 cubic feet in the holder, whereas the cost of gas from the blocks would be $6.12 for 38,000 cubic feet, or 1,611c. per 1,000 cubic feet, the product in gas of 2,000 of gas blocks. If these calculations are anywhere near correct a revolution in gas manufacturing may be anticipated.

It will be remembered that the gas works of Messrs. Rathbun were burned down not long since.

THE SWEDISH SUPPLY.

The *Timber Trades Journal* of Feb. 2, says: Swedish saw mill owners will do well to curtail their stocks if they can, but the question is, will they be able to accomplish this, to them, much desired end? The difficulty of the task will lie in one common bond the various conflicting interests predominating throughout the numerous shipping ports that lie along the Gulf of Bothnia—from Tornea, in the extreme north, to Gefle, and the more southern loading places. Of course, the greater portion of the Swedish supplies lie between Gefle and the Pitea River, and this region, embracieg the Sundswall, Soderham, Hudikswall, and Hernosand districts, represents an export of something like 500,000 standards of sawn wood, and if any general agreement could be arranged binding the shippers to some limitation, the effect on the markets here would undoubtedly be very considerable. Now that the season has fairly commenced it is very doubtful whether the generality of shippers will care to embarrass themselves with pledges, and the likelihood is that no limitation will be noticeable on the average quantity of stocks for shipment first open water.

It was suggested at the meeting of the Swedish Society of Saw-mill Owners at Stockholm, that the stock notes should not be issued before the middle of the month, and that they should then only be forwarded to one agent in each country. But this has not been acted upon generally, and we note several price lists have been issued to the trade here. Two of the largest Swedish shipping houses already have their prices in print, and any further delay, if contemplated, has evidently not been carried out. The task of limiting the export of a country like Sweden in the 19th century is a Herculean one, and if it is accomplished it will make the present season stand out as one of the most remarkable in the annals of the trade We have often reports of similar arrangements to record, but the result has always been a direct contradiction to them, illustrating the immense difficulty surrounding such a scheme.

To carry it out successfully, the compact should, we consider, have been entered into much sooner than has been the case this time; for though a limitation of the product was mooted in November last it does not appear to have taken any shape until after the year had finally closed. Under any circumstances we scarcely think it can succeed, the obstacles in the way being so immense.

That several of the large export houses will stick to their promises, if things continue as they are, we have very little doubt; but circumstances alter cases, and with a rising market, with plenty of the raw material available, the self-denial on the shipper's part in keeping his mills working below their full strength would, we fear, be more than human nature is capable of.

FIRE EXTINGUISHING APPARATUS FOR SMALLL MILLS.

Some time ago we called the attention of our manufacturers and others to the importance of a more general adoption on all the floors of manufacturing establishments of water buckets, axes, and other hand appliances which might be useful in combating fire.

The *Manufacturer*, published at Toledo, Ohio, takes the subject up, and gives some figures as to the cost of supplying factories with simple means of self-protection against fire.

Among mills and factories where the capital invested is too small to admit of the outlay for pumps, hose and sprinklers, usually provided in larger establishments, says the writer, a large proportion remain without any means of suppressing any fire that may break out in the premises, though the ravages of the element in this class would indicate some preventive measure as an absolute necessity.

Forty-five dollars is a liberal estimate for the cost of casks, buckets, and auxiliary apparatus, in an ordinary four-story mill. The apparatus will last for many years, and may be the means of saving property at any moment. A suitable arrangement for such a mill would be as follows:—

For each floor two good water casks, with covers to exclude dust, four pails, two axes, two crowbars, and one saw. For water casks, empty oil barrels are as good as any, if not the best. These should be fitted with covers like cheese box covers, setting loosely over the casks and having handles on them to lift them off by. All the salt that the water will dissolve should be put into the casks, both for its effect on fire and as a preventative of freezing. One cask on each floor should be placed near the stairs and the other as remote from the first as practicable; over and about each should be hung two pails, an axe, and bar, for reaching quickly such fire as may lodge in any concealed space, and by the cask on each floor nearest the stairs, a medium sized hand saw. Wooden pails are unfit for this use owing to their liability to warp, shrink, and fall to pieces when handled at a critical moment. Fire pails should either be of leather, paper, or metal, well galvanized or otherwise protected, preferably the latter two, which neither shrink, crack, nor deteriorate with age.

The cost of such an equipment for such a mill would be about as follows:—

8 casks at $1.00 each	$ 8 00
Covers for same at 25c. each	2 00
16 paper pails at $4.80 per dozen	6 40
8 axes at $1.25 each	10 00
8 bars at $1.00 each	8 00
4 saws at $1.50 each	6 00
Salt	60
Painting and placing in position	2 00
Total	$43 00

These figures are sufficiently liberal to cover all freights and other charges, and are for goods of the best quality. Every article should be marked in large letters, "Not to be removed except in case of fire," and instant discharge should be the penalty for disobedience of this rule. Somebody should be charged with the duty of examining the casks at stated intervals, keeping them full and seeing that the other articles are in their places. With these precautions and light expenditures, provision is made for extinguishing any fire discovered in season, with apparatus easily understood and requiring no previous drill for its application, and which has proved adequate in a vast multitude of cases.—*Scientific American.*

How a Union Soldier Made a Fiddle.

It was at the "Brandy Station," Va., in the winter of 1863-4, says the Westfield, Mass., *Times*, that George M. Colt, Company C. Second Vermont Volunteers, proposed to make the cheer-giving instrument; and with a hatchet, jack knife, file, and a piece of junk bottle as his only tools, he cut a piece of maple from a stump that grew on the bank of the Rappahannock River, and set to work. The back and sides of the fiddle are made of one piece—a "regular dug out." The top is of hemlock taken from a box which brought some "goodies" from their friends in "Varmount." The bow is of maple. The keys were made from the horns of some Confederate cattle that fell into our hands and were devoured by our carnivorous soldiery, so that the poor brutes contributed to our mental as well as physical welfare. The hairs were pulled from the tail of the Colonel's horse, who was fond of music and never raised a foot in resistance. It is said that he even signified his willingness to furnish enough of his hoofs for glue, but that was found elsewhere, and the instrument was completed and in the hands of a modern "Paganini," who rose for the occasion, gave forth its soul-stirring strains. It conjured up the "stag dances," serenaded headquarters, and was admired and cherished by the officers and men of the "Green Mountain Boys." The rest must be left to imagination, as far as its army record is concerned. Suffice it to say, it was "honorably discharged," and has been the hero of several occasions since the war, receiving the first premium at the Vermont State Fair. Rude as is its origin, its tone is remarkable sweet and expressive, especially in the rendering of "Old John Brown" and other airs that were offsprings of the war, which seem to revive in it the memory of the exciting scenes of its early existence. Its maker and owner still lives, though he received wounds after the production of his instrument that have nearly disabled him for active duty.

Amount of Lumber in Michigan.

The following table shows the amount of lumber now on hand at the principal manufacturing points in Michigan:—

	Feet.
Muskegon	120,000,000
White Lake	18,000,000
Grand Haven	54,000,000
Manistee	20,000,000
Ludington	6,000,000
Big Rapids	10,000,000
Flint	15,000,000
Saginaw River	376,000,000
Lake Huron shore	112,000,000

There is but little difference between the amount on hand now, as shown above, and at the same period last year.

The Limit of Tall Buildings.

The New York *Mail and Express* says:—Some concern is expressed by a Boston contemporary lest air and light should be kept from other buildings by the immense structures which now rise 150 feet or more skyward in our city. It is not probable that any limit of the height of buildings to be erected in New York will ever be established. It ought to occur to every intelligent person that the lower stories of a tall building will suffer quite as much as surrounding structures from the effect of its towering height upon the air and light in the street below, and therefore builders will not rear their walls far enough heavenward to make them a nuisance. Manhattan island is so small that its surface is too valuable to be covered with low structures, and it would be folly to prescribe a limit for their height. The authorities need to adopt more rigid regulations as to the safety of immense buildings, but if any man thinks it would be profitable to build a structure 200 feet tall, he should be at liberty to undertake the enterprise, if he conforms to the law in making it safe. There is ample room within the city limits above the Harlem for those who dislike tall buildings, but people who remain on Manhattan island must accept them as inevitable.

Four Million Pails.

The pail and tub industry ot Keene, N. H., consumes more timber than all others carried on in Cheshire county, says a contemporary. There are 40 pail and 30 tub lathes in operation in the county; each lathe turns out on an average 100,000 pails a year, consuming 450 cords of sapling, which gives a product of 4,000,000 pails from 18,000 cords of pine. The 20 tub and bucket lathes use a proportionately large quantity, and as great quantities of staves are sawed and sold for use outside the county, it is probable that 40,000 cords of sapling pines are cut every year. Besides much hardwood that is cut for manufacturing purposes, a vast quantity is used for fuel. Yet many competent judges think the yearly growth equals the amount cut and that there is as much growing wood and timber in the county as there was thirty years ago.

A Maniac Woodsman.

Not a little excitement was occasioned in Crystal Falls, Mich., recently, by the arrest of a Canadian named John Breen, an employee of the Kirby-Carpenter Lumber Company. He was uneasy and dissatisfied, and kept wandering from camp to camp, showing signs of insanity, and finally becoming so violent and dangerous that it was deemed best to arrest him. With a maniac's strength he wrenched the iron bars from the lock-up windows and escaped. He was recaptured, and placed in an inner cell, but he tore the door from its hinges, and it was only with the utmost difficulty that he was finally restrained.

A NEW narrow gauge railroad is to be built between North Anson and North New Portland, Me., a distance of eight miles. The lumber operations on the Carabasset and Dead rivers will be greatly facilitated by this road.

A PLANING mill man at Muskegon, Michigan, states that there have been more buyers of dressed lumber at that point within the past month than in any previous year during the same time. He predicts that the rail trade out of Muskegon this year will be very large.

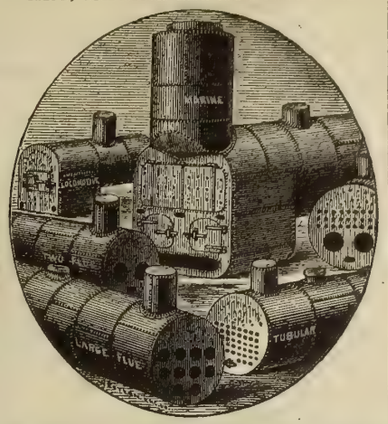
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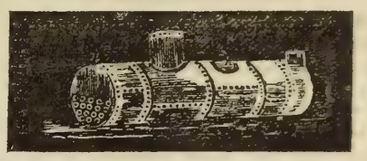
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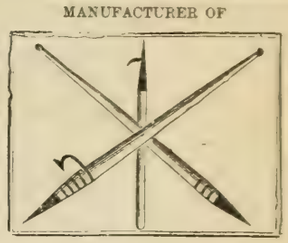
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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., MAR. 1, 1884.

THE Flint & Pere Marquette railroad hauled in January 24,246,182 feet of logs, the largest record yet made by the road.

THE Merchants Bank of Montreal has instituted an action for nearly $1,500,000 against Castle & Scheulenberg, a lumber firm. The suit represents a claim written off the books of the bank seven years ago, and every effort will be made to collect it now.

A RETURN was laid before parliament the other day, as to Manitoba's imports of lumber. It was shown that the total value of lumber brought into the Province of Manitoba during 1880 was $50,250. the duty thereon being $9,263; and for 1882, $482,672, duty $66,599. In the year last mentioned there was imported dressed timber alone to the value of $332,997.

IT has been said above a whisper that officials in Arkansas, Wisconsin, Minnesota, as well as in some of the other states have winked at, and abetted timber frauds, and now it is learned that an official in California who should have his eye on timber land grabbers, had it in another direction, while grabbing was going on. It is claimed that 88,000 acres in Humboldt county have been fraudulently obtained through the collusion of public officials.

THE *Monetary Times* says:—The movement of lumber in Ontario is not lively, but there is considerable demand from the United States for good lumber, which is not in heavy supply at any Canadian points. The prospects are that all the dry, choice lumber will be picked up in the spring at prices nearly as good as those of last year. The price of the new cut will depend largely on the current of general trade. The quantity, it is expected, will be at least one third less. Outside of the Ottawa district, the impression is, that there is no more lumber at present cut in Ontario than will be required for our own purposes or for the usual export demand. As to coarser grades, some reduction in price is not unlikely.

LOGGING in Manitoba has been very dull this season, but enough was left over to ensure a fairly active summer. Bulmer & Co. are the only ones at work in the woods. The Rainy Lake Company has quite a quantity of logs on hand but it is doubtful if their mill will be rebuilt in time for the season's work. The Keewatin Lumber Company did not cut any this winter, satisfied that the 5,000,000 or 6,000,000 feet on hand would be sufficient.

A SALE of timber was held on the 25th inst., at Callington, when some 420 oak, 150 ash, 113 sycamore, and a quantity of lime, elm, beech, chestnut, fir, and other trees, grown on the Whiteford Estate, the property of the Duchy of Cornwall, were offered by Mr. W. J. May, auctioneer, Liskeard. The total sum realized by the sale was £852 12s. 6d., the attendance and competition being very satisfactory. The whole was divided into about seventy-two lots, the highest price being obtained for lot 59, nine oak trees, £38 10s.

The Ottawa *Citizen* of Feb. 21, says:—Yesterday Mr. Allen Gilmour, one of our great lumber kings, whose mills on the Hull side were destroyed by fire last season, visited the site of the old mill and to the great disappointment of all said that for the present idea of rebuilding had been abandoned. This is much to be regretted, for this mill furnished work and bread to many a household. It is much to be regretted that the Messers. Gilmour at the present moment do not see their way clear so as to guarantee them in putting up a new mill. It is earnestly hoped that ere long a revival in our great lumber trade will put this substantial old firm in such a position as to guarantee them in once more launching out in a new mill.

OREGON CEDAR.

The *Lumberman's Gazette* says:—A San Francisco paper notes the departure from that port of a ship destined for Europe loaded with redwood and other finishing timbers of California growth. The shipment is in the nature of an experiment, but it is stated that the conditions of cost, transport and market have been carefully studied, and that there is no doubt of the success of the enterprise; and it is predicted that other ships, and many of them, will follow. It is a fact well known that Oregon produces a greater variety and much finer woods than California. The Port Orford cedar is of the same general character, but in every practical respect a better timber than the redwood. Its color is better for panel and other fine work, and its grain is more distinct. We have a dozen or a score of other fine woods, but the best and most plentiful of all is the myrtle, which grows along the streams of the southern coast. The beauty of this wood is beyond comparison. It is nearly as dark as the black walnut, mottled with mahogany colored streaks, is hard and susceptible of a perfect polish, and retains its toughness when sawed into the thinnest veneering. There is no ornamental timber except rosewood equal to it. Even the curly and bird's-eye maple, so much admired, is dingy and cheap looking beside it, and the famous redwood is as inferior as ordinary cedar is to mahogany. If this beautiful timber were once introduced in the east or in Europe, we believe that it would soon be in great demand. It grows in forests in the counties of Coos, Curry and Douglas, easily accessible to the ocean. Who will introduce it?

INTUITIVE FOREST PRESERVATION.

"We notice in a northern New York exchange," says the *Northwestern Lumberman*, "the statement that coal stoves are becoming a common means of heating houses in the rural districts of that part of the State. This suggests two facts: That in that once timbered country wood is becoming so valuable that coal is a cheaper fuel; and that a stop is being put to the destruction of forests for fuel purposes. The latter condition corroborates what has before been asserted in the *Lumberman*, that the owners of woodlands in northern New York are economizing the second growth groves that everywhere abound, which are largely maple, and are reserved for sugar making. The prospect is that in New York, as in England, there will be more timber ten or fifteen years from now than there was ten or fifteen years ago, and that not the effect of legislative interference, but through the law of personal interest, which is stronger than legislative enactments. All this leads to the conclusion that the best way to promote the cause of forestry is by the dissemination of an influence in favor of tree preservation, the value of the woods, and the economy of saving or making the most of all that are standing."

A GOOD EXAMPLE FOR US.

The evil from which France suffered in the seventeenth century our country is enduring today, and it will require prompt measures to correct it. Our apparently limitless territory, studded over with forests, has made us profligates, even to wastefulness, and we have been in danger of entirely destroying the greatest of our heritages.

In Prussia and Germany the laws relating to forestry exhibit the wisest forethought on the part of the Government, and the people sustain it in every effort to preserve what other generations had well nigh deprived them of. These nations set us an example which it would be wise to consider. Their laws have given rise to a large system of tree-planting, thinning and preserving, and also to an enormous literature regarding arboriculture and cognate subjects. Millions of trees are annually set out, examined and transplanted, and great rainfalls and droughts are obviated, while malaria from both causes is greatly diminished. The ill results of the old, denuding process are rapidly disappearing, showing that natures capillary clothing must be respected, for utilitarian as well as sentimental reasons.

In the United States the general state of extravagance prevailing in respect to forests is largely due to ignorance. Only lately has the scientific man impressed upon him of average intelligence the necessity of tree preservation, and the desirability of using other materials than lumber for many purposes in which wood was formerly considered indispensable. The wakening anxiety in regard to forestry culminated, a little more than a year ago, in the formation of what was denominated a forestry congress, of which Protessor Loring, of the Agricultural Department was elected chairman. Following their interesting sessions were the dissemination of much information in regard to arboriculture in the United States, and the inception of village and country societies for the purpose of tree-planting.—*C. Holloway in Manhattan.*

Northwest Timber.

In a speech in the House of Commons Mr. Ferguson, M. P., said:—Mention is made of people leaving there on the ground that there is neither fuel nor building material. I will confine my remarks chiefly to Alberta. As to wood, there is not much in that country, but nature, through its wisdom, has compensated that district by suppling an almost unlimited quantity of coal. The result of my observation is that I can unhesitatingly state that in the whole province of Alberta I saw no place, nor do I believe there is a locality, where a farmer with his own cart need haul fuel more than a distance of five miles, and in half the cases within that distance. As to building material as far west as Brandon—I am now coming back to Manitoba—I know good building material. American pine and our own Rat Portage pine, is sold within a few cents per thousand as cheaply as it can be purchased to-day in the lumber yards at Ottawa. I saw as good siding for buildings sold retail to hundreds of people at $25 per thousand, as you see in Ottawa market to-day. Doors, frames and window sashes, with glass, can be bought even cheaper than in Ottawa.

Asbestos.

Asbestos in its purest form has recently been discovered in almost unlimited quantities in Canada. The fibres are described as long, white, flexible, and as fine as silk. Large amounts of asbestos have been mined in the last two years in Thetford and Lorraine, Megantic County, and it is claimed that the county has produced more of the article than the total output of the world during the same time. Wolfe county also has several large mines, which are to be operated next year by English capitalists. All these mines referred to are situated within a short distance of the Quebec Central Railway, offering good facilities for shipping. The mineral is taken to Quebec, where it is crushed and cleaned, and thence sent to England. Among the many uses for asbestos is the manufacture of a paper which is indestructible by fire. This has been successfully accomplished in France, as well as the discovery of an indelible ink with which to write on the paper. The manufacture of this paper will prove of value in case of fire, as all important documents can be drawn up on it. The weaving of asbestos cloth is also likely to be extensive, as well as other textile fabrics such as gloves, table linen, etc. The article is also extensively used in fire-proof paint, fire-proof roofing, for packing safes and for piston rods in steam engines.—*Portland, Me., Argus.*

An Unlucky Cargo.

A load of staves for Rondout, which had been on board of five different vessels and wrecked three times, was loaded at Ellsworth a few weeks ago for the sixth time, on board an Ellsworth vessel for its port of destination, under a most careful and skillful master. In the course of the voyage the vessel was, one morning, broad off Salem, where she had been for a harbour. The captain was on deck congratulating himself on the prospect of having a fine run, with a fair wind, over the shoals, when he was suddenly filled with consternation at the sight of a steamer only a very short distance off, heading right for them. A collision seemed inevitable, and he called all hands. The watch below started at the sound of the captain, sprang on deck for their lives; when, lo, the steamer had faded into thin air! No sound of her was heard and no trace of her was seen afteward. The captain felt certain that he saw the steamer, and concluded that he had an ill-fated cargo. So he ran back to Gloucester, and a few days later went to Boston where he hauled his vessel up for the winter, discharged his crew and came home to Ellsworth. At any rate such is the story first related by the captain and then to credulous audiences by Ellsworth skippers on the street corners.—*Ellsworth Cor. Mount Desert Herald.*

The "Running Season."

Present indications are unmistakable that the coming spring will be an excellent one for the "running of logs." The vast accumulations of snow in the woods must furnish a heavy volume of water, and unless an extremely warm spell and continued rains succeed in rushing this body of snow in a melted condition into the streams in too short a period, the probability is that the "running season" will be as favorable and successful as has been the "logging season." Reports from northern Michigan pineries, as well as from those of Wisconsin are to the effect that the snow is nearly three feet deep on the level, which is an unusual body of "the beautiful" at this season of the year, and any disappearance of the same seems to be at once replenished by a fresh supply. Lumbermen generally are jubilant at the success which has thus far attended their logging operations, and the flattering prospects which abound for successfully securing the log crop, and making it available for operations during the manufacturing season which will soon be upon us.—*Lumberman's Gazette.*

Pine Plantation in Delaware.

A northern man bought a farm in Kent County, Delaware, a number of years ago, the land having been worn out by tobacco growing, and been without cultivation about 20 years. He planted ten acres of his purchase to yellow pine, sowing the seed broadcast. When our informant saw the plantation the trees had been growing ten years, and stood in clusters, according to the natural way pine groups itself. The trees ranged in size from four to 16 inches, and were 30 to 60 feet tall. Their bodies were smooth and straight, and free from limbs from 20 to 30 feet upwards from the ground. This was a good example of what can be done in

tree growing in Delaware. Doubtless the same thing can be repeated on much of the worn out land of the Atlantic states of the South, and the question arises, would it not be profitable to rehabilitate a portion of the land in Delaware and Virginia, at least, in the way indicated. Certainly there is no need of going without wood and lumber in any of the older states when such timber as that on this Delaware plantation can be raised in ten years.

HOW THE INVENTOR PLAGUES HIS POOR WIFE.

A facetious chap connected with one of our daily newspapers gives the following amusing burlesque on the trials of an inventor's wife :—

"It is all very well to talk about working for the heathen," said one, as the ladies put up their sewing, "but I'd like to have some one tell me what I am to do with my husband." "What is the matter with him?" asked a sympathetic old lady. "William is a good man," continued the first, waving her glasses in an argumentative way, "but William will invent. He goes inventing round from morning till night, and I have no peace or comfort. I did'nt object when he invented the fire escape, but I did remonstrate when he wanted me to crawl out of the window one night last winter to see how it worked. Then he originated a lock for the door that wouldn't open from midnight until morning, so as to keep burglars out. The first time he tried it he caught his coat-tail in it, and I had to walk around him with a pan of hot coals all night to keep him from frezing." "Why didn't he take his coat off?" "I wanted him to, but he stood around till the thing opened itself, trying to invent some way of unfastening it. That's William's trouble. He will invent. A little while ago he got up a cabinet bedstead that would shut and open without handling. It went by clockwork. William got into it, and up it went. Bless your heart, he staid in there from Saturday afternoon till Sunday night, when it flew open and displayed William with the plans and specifications of a patent washbowl that would tip over just when it got so full. The result was that I lost all my rings and a breastpin down the waste pipe. Then he got up a crutch for a man that could also be used as an opera glass. When ever the man leaned on it, up it went, and when he put it to his eye to find William, it flew out into a crutch and almost broke the top of his head off. Once he invented a rope ladder to be worn as a guard chain and lengthened out with a spring. He put it around his neck, but the spring got loose and turned it into a ladder and almost choked him to death. Then he invented a patent boot heel to crack nuts with, but he mashed his thumb with it and gave it up. Why, he has a washtub full of inventions. One of them is a prayer-book that always opens at the right place. We tried it one morning at church, but the wheels and springs made such a noise that the sexton took William by the collar and told him to leave his fire engines at home when he came to worship. The other day I saw him going up the street with the model of a grain elevator sticking out of his hip pocket, and he is fixing up an improved shot-tower in our bedroom."

RAILROAD TIES IN A HOT CLIMATE.

At a meeting of the Institute of Civil Engineers for Ireland some short time back a paper was read on "Railroad Ties in Mexico," from which we extract the following :—The sleepers used are 9 ft. long, 10 inches wide, and 5 in. thick. The selection of suitable wood for sleepers has occupied much attention. Good, well-creosoted Baltic sleepers have been tried on a large scale, and found to become decayed and useless at the end of about four years. Hard, strong oak sleepers, obtained in the country, have also been tried in large quantities, and found not to last more than three or four years. The timber of both the Baltic and oak sleepers seemed to undergo a rapid change and become quickly converted into a dry spongy consistency. There was no appearance of insect ravages, the timber had evidently not been able to withstand the great heat or dryness of the atmosphere. The best wood yet discovered for sleepers is zapote. It is essentially a tropical timber, and is exceedingly durable for outdoor or indoor work above or below ground. Samples of this wood taken out of buildings said to have been erected more than two centuries ago did not show the slightest signs of decay. The wood was as sound as the day it was put into the building. This wood, however, is very scarce and very expensive. In color it is nearly as dark as logwood. It is very heavy and sinks in water, and is so hard that the boring of the holes for the spikes and forming the grooves for the rails is very laborious work. It appears to be almost impervious to decay, but it has a tendency to split if exposed to the heat of a tropical sun for a few months. For this reason the zapote sleepers must be kept equally covered with ballast. The next best quality of timber yet found in the country, and of which by far the greater number of the sleepers on the line are made, is sabino, a species of cedar. The general colour of the wood is either a light yellowish brown or a light pink, and in appearance is very similar to the cedar used for ordinary lead pencils. It is a resinous wood, with a peculiarly fragrant odour, and its strait-grained, readily-worked, and does not appear to be attacked by any insects. In many of the very old buildings on the upper plains, beams and posts of this timber are still standing, and show very little signs of decay. For sleepers it is very durable, and those that have been down for several years indicate that they are more likely to give way from the actual wearing or cutting in of the rail flange than from natural decay.

The Lost Forests of France.

A writer in *L'Union Medicale* laments the destruction of the French forests, and the lesson for us cannot be learned too soon. The writer says :—

"How many regions formerly prosperous have become sterile deserts by the incensate destruction of forests? When the forests disappear the soil dries up, the water is replaced by sand, the water-courses are alternately arid paths and devastating torrents. Our attention is naturally drawn to the great forests of Gaul and of ancient France; we follow with pleasure the description of the first clearings made by the monks, which, kept within certain limits, prepared the fertile France of to-day. But it is with sadness that we observe the increasing impoverishment of our forests and the pernicious effects resulting from it, whether it be in our water courses and our cities or for our bodily health. The author in giving our present status as to woodlands, tells us that in the extent of our forests as compared with our whole territory we rank but eighth among European nations."

The Hudson Bay Route.

There is a difference of opinion as to which side of Lake Winnipeg a Hudson's Bay railway ought to take. Alderman Clementi Smith, of Brandon, favors the west side. The east side, where he wandered four years, he describes as a country of innumerable rocks. "In many cases the rocks rose to a height of 20 feet. Muskegs intervened. The timber was stunted and worthless. On the west side of Lake Winnipeg there was considerable improvement, but the country was flat, free from rocks and the land was good, but the best country was west of Lake Manitoba." Mr. Adam Nelson, of Selkirk, from personal knowledge, makes a similar statement.—*Monetary Times.*

A Remarkable Oleander.

The largest oleander tree to be found anywhere, perhaps, is on G. H. Packwood's place, at Spanish Town, Fla. It covers a piece of ground 39 feet in diameter; from the ground to the top of the topmost limb is a distance of 25 feet; at the surface of the ground the trunk is divided into 20 or 25 separate stems, the group being at least five feet through, and one single stem is 14 inches thick. The tree is a very old one.

Rosewood.

There are several speeimens of rosewood, and the botanists have not entirely conquered this branch of their study. Not everyone knows why the name "rosewood" was applied to the dark wood so highly prized for various purposes, When first cut the fresh wood of the tree gives out a fragrance that is strong and agreeable, much resembling the door of roses.

TORONTO NEWS.

TORONTO, Feb. 25.—A terrific explosion occurred in the Bank of Commerce this morning. Shortly after nine o'clock when the clerks had just commenced work, George Shaw, the messenger, proceeded to open the vault, and struck a match to enable him to see more clearly, when a sheet of flame shot up and there was a lond explosion. Shaw was lifted from his feet and thrown a distance of twenty feet, being severely injured about the head and face. Twelve clerks seated at their desks were knocked down like nine-pins, and Fuller, the paying teller, who was standing looking out of the window on to Yonge street, was blown through the sash into the road and picked up insensible and bleeding. Heavy plaster rained down in showers, the railings and guards were twisted off the counters and flying pieces of glass inflicted innumerable cuts, on the bewildered clerks. Every window in the lower part of the building was blown out. The iron doors of the vault were almost twisted off the hinges. Everything was confusion, and the wildest rumours got afloat of burglary, &c. The bank was soon besieged with customers and others to ascertain the real state of affairs. It appears that plumbers were at work on Saturday, and either through their neglect or that of the clerks a jet in the vault had been left open, and the gas had been escaping since closing work on Saturday. The shock was felt for a considerable distance. The contents of the vault sustained no injury. The damage is variously estimated at from $1,000 to $5,000. Those injured are Mr. Bolster, sub-manager; Mr. Fuller, teller (severely); Mr. Beauregard, clerk, and Shaw, the messenger. Several others are slightly cut.

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IGNORANCE WANTED.

Under this curious heading the *Northwestern Lumberman* in a late issue prints a thoroughly practical and sensible editorial. From it we clip the following paragraphs :—

There is considerable questioning among the wholesale dealers of this city, (Chicago), and probably elsewhere, as to the usefulness of lumbermen's exchanges, the gathering and publication of statistics, and the information that is conveyed in lumber journals. There are those who, on the spur of the moment, would be inclined to annihilate the whole outfit of informative means, at one blow. They claim to think that the reason why wholesaling lumber of late years has become less profitable than it was a few years since is because of the publication of statistics, and the circulation of exact and comprehensive data about the manufacture and trade in lumber. How such information cuts down margins and destroys profit the reactionary individuals who croak at knowledge do not attempt to explain. This is doubtless because the reason, if any at all, must appear to their own discredit, since full and accurate data regarding logging, manufacture, visible supply, state of demand, prices, transportation, new fields of operation, etc., can do no hurt to anybody, save in one way ; it may prevent an individual or a class from getting the advantage of some other individual or class. It must be confessed that the tendency of the times is to narrow down profitable margins in all kinds of business. But the recalcitrant individuals in the lumber trade make a mistake when they think, or pretend to think, that a thorough knowledge of the business at large is the cause of the loss of profits. The general survey of the situation now obtainable through exchanges and trade journals prevents a blind following of surface, or only apparent indications, that would surely lead the trade into many an irretrievable disaster from which it is now able to escape. In fact if the trade would more closely follow the light as it is reflected by the exchanges and the trade journals it would often be saved from losses it now experiences.

When the reactionary lumberman attributes a loss of profits to the general spread of information by means of exchanges and trade journals, he is getting the vehicle in front of the team, so to speak. The causes of an overloaded market, and a consequent decline in values, would have existed the same without the means of circulating data. The evil results of overproduction and overtrading would, in the absense of widespread knowledge, be much worse than now.

Let us suppose that there were no lumbermen's exchanges, and no lumber journals, and the manufacturers and dealers in lumber were obliged to rely on the daily press for their information. Every intelligent lumberman knows that what lumber news there would be sifted through the news columns of the daily press would either be wide of the truth through lacking of means for acquiring accurate information, or else it would be garbled for private advantage. It would be utterly without benefit, and often would be a cause of damage by conveying a false impression.

An extensive circulation of trade knowledge no doubt prevents a monopoly of advantages by a single class. All are reduced to a legitimate basis. The retailer becomes as well informed as to the sources of supply and the ways of reaching them, the cost of freights, prices, etc., as the wholesale merchant himself. On the other hand the general trade is kept fully posted on the amount of log crop, and the outlook for supplies, the development of producing districts, and the new directions of trade. The manutacturer also has the benefit of obtaining a comprehensive view of the whole situation.

The publication of facts concerning the lumber business may prevent the hoodwinking of any section of it, and thereby deprive some men of the advantages they had contrived for their own benefit ; but at the same time all are guarded against surprises and sudden disaster. It would seem to a close observer that the latter benefit were immeasureably greater than the former.

The man who grumbles at trade associations and the collection and dissemination of data concerning his own business is behind the times. He acknowledges that he is not equal to the situation. He the same as avers that unless he can take advantge of his neighbors ignorance he cannot make money. There is no use in arguing with such a man. The subject has been referred to in this article in order to straighten up the few really good men who, under the disappointment of the past unprofitable year, have unthinkingly snatched at a fallacious reason for their misfortunes. We are confident that if they take a second thought in the matter they will conclude that what they need is more, instead of less, light on the lumber business.

SAWDUST.

One of the greatest eye-sores to a mill man of anything in connection with his business is the huge pile of sawdust usually obtaining vast proportions in the neighborhood of his mill. Inventions for the utilization of this large output of waste material have become quite numerous of late. Alcohol, gas, and other commodities have been evolved therefrom. Sawdust conveyors have been patented to take this waste and dump it into the fire-box for fuel, which is one of the best methods yet discoved for disposing of it, as it is a valuable labor saver ; but while the sawdust is thus consumed the slabs and edgings formerly used for fuel accumulate about as fast as did the former before being utilized as above. A prominent Ludington firm say they have introduced gangs in order to save a good percentage of this waste, and thereby increase their output of lumber from the same quantity of logs by the great reduction of the saw kerf. This may do in large establishments, but we apprehend it will be after the present generation of mill men shall have passed off the stage of action, and pine timber has become much scarcer than at present, before the circular saw will lose caste, as it is almost an absolute neeessity in any well regulated saw mill of either large or small proportions, and stands without a rival in the mills of the smaller class. The introduction of lath machines and other manufacturing devices with a view of utlilizing the slabs, edgings, and other waste product of a mill, in connection with a sawdust carrier to the furnace, is the best plan yet devised for disposing of what is useless material under other conditions.

JAPANESE HOUSES.

The Japanese houses are generally one-storied, but roomy, and of exceedingly neat appearance in and outside. They much resemble Swiss chalets, with the roof protruding over a basement veranda, from six to eight feet wide. The wooden framework of the main walls is filled with bamboo lath, covered with clay, and heavy rafters are put on it for the roof, to give the whole structure the necessary stability. No permanent partitions are found in the interior, and light wooden panels, moving on grooves in porcelain castors, divide the different compartments. They can be removed and transposed at will to form new partitions. Transparent paper serves for the window frames, and the same material, made of the bark of mulberry tree and painted over in colors with elaborate patterns,is used for curtains, portieres, and many other items of ornaments. The floors are covered with mats made of rushes, which all over Japan have the same dimensions —six feet long, three feet wide and two inches thich. The size of these mats or kins, as they are called, regulates all the measurements of a house ; and if the Japanese wants to have one built, he only states to the architect the number of kins it has to contain. These mats are always kept scrupulously clean, and never allowed to be trodden upon by the sandals of the natives or the boots of foreigners, but only with stockings or bare feet. Chairs, tables, and bedsteads being almost unknown, the Japanese sit and sleep on this matting, and, except some ornamental cabinets and screens, hardly any other furniture incumbers the room. The reception and business apartments open toward the street, and the back of the house contains the living and sleeping rooms, as well as the kitchen, which are all more or less open to the view of the passersby. All the household utensils are made of lacquered papier mache or bronze in curious shapes, elaborately ornamented, and with a view to stow them away after use in the smallest possible space, economy of space being a cardinal virtue in the construction and management of Japanese houses.

In winter the rooms are warmed by coal pans —a very insufficient method in a climate like that of Japan, but counteracted by the number of quilted gowns both sexes wear one over the other in cold weather.—*The Builder.*

THE SEQUOIA.

In Miss Gordon-Cumming's book, *Granite Crags*, we get some further information as to the mighty trees to be found in the Yosemite Valley, California. Speaking of the Sequoias, which are called in this country Wellingtonias, Miss Gordon-Cumming sees nothing admirable about them but their bigness. They reminded her, when looking at them of the old Dutch toy trees in a Noah's ark, with a small tuft of foliage on the top of a large red stem. She prefers for beauty the Indian deodora, perhaps also the Kauri pine of New Zealand, the bunya-bunya of North Australia, and the Norfolk Island pine, all of which surpass the giant trees of the Yosemite Valley in elegance and beauty of form.

It is even doubtful if the Sequoia is entitled to be considered the loftiest of trees. The Eucalyptus amygdalina, which has been asserted to attain the height of 450 feet in the Victoria Ranges, is about 100 feet higher than any Sequoia of which we have heard mention. In girth, however the California trees stand pre-eminent, if Miss Gordon-Cumming's account be correct, for she tells us that a specimen ha been discovered in Visalia county which measures 132 feet in circumference.

The age of some of these trees is computed at more than 2,500 years, so that accepting that date as an approximation to accuracy, they must have been growing when Constantinople (then called Byzantium) was founded by the Greeks. and when the prophet Jeremiah was in existence. It is feared, however, that these vestiges of creation must soon disappear, like the Red Indians, before the encroachments of civilization, and (as far as trees are concerned) the pitiless lumberman

> "Wield the axe on every side,
> Pity not the Forest's pride."

It is said that a law was passed by the California Government to prohibit the cutting down of trees over 16 feet in diameter, but this is rendered nugatory by burning them down, and destroying those of smaller dimensions, against which there is no penalty.

We learn from the same authority that wheat farms in California are 60,000 acres in extent (over 93 square miles.) This beats the trees, if it is to be understood that the cultivation of such a territory is under one farmer. Then they have potatoes of 15lbs. weight, and cabbages 6 ft. high.

It seems almost to bring Gulliver's Travels within the bounds of probability, though of the immensity of some of the Sequoia tribe of trees there is no longer any question.—*Timber Trades Journal.*

Exhibit of Building Materials.

The "Permanent Exhibit and Exchange of Building Materials and Improvements,' Chicago, is now receiving exhibits, and will soon be in shape for visitors. It is located on the third floor of the building at the northeast corner of Wabash avenue and Washington street, occupying a space 90x150 feet, less only the space necessary for stairways add light shaft, and to this may be added the floor above, if necessary. This large floor is fitted with platforms which will be rented to parties desirous of making a permanent exhibit of their goods in such a central and favorable place. The receipts from rentals will furnish the financial support for the enterprise, as no admission fee will be charged. Thus far the space has been held for the acceptance of Chicago firms, but, after this time, space not taken up by home parties will be let to eastern exhibitors, many of whom expressed a wish to take advantage of this opportunity to show their goods in the west. The range of displays will cover everything that goes into the construction and fitting up of buildings of the better class. Stone, brick, terra-cotta, woods, roofing materials, builders' hardware, plumbers' and gas fitters' goods, etc., will be represented. With the prospect that the new Builders' Exchange will have its rooms in the same building, and their space all applied for, the managers of the exhibit think that their enterprise will not only be successful pecuniarily but that its influence will be great.

An American View of the Hudson Bay Route.

The *Northwestern Lumberman* says :—The project for a northwestern outlet to Europe by way of Hudson's bay, Bristish America, is making headway in the minds of the people of the Canadian North-West. Even the farmers of Dakota are awakening to the importance of the scheme. Surveys of a railway from Winnipeg to Hudson's bay have been made. The only question of feasibility now is as to the length of the navigation season on the great northern sea. Tests of this will be made the coming summer. The entire project is yet a problem, and may utterly fail on account of the difficulties of northern navigation. At the most the Hudson's bay route would become only a competing one to Europe for the surplus grains of the Northwest. It must not be forgotten that the old routes are yet sufficient to glut the grain markets of Europe, and that any new northern route over a single railroad cannot cut much of a figure in the general American grain traffic. It should not be overlooked, also, that the future grain product of this continent will mostly be wanted at home, to feed our rapidly growing population. A Hudson's bay outlet to Europe would be a benefit to the far northwestern farmer, while it would to no appreciable extent change the old lines of traffic.

Forest Preservation.

Apropos of the important question of the preservation of our forests, Canadians and Americans might profit by the experience of continental forestry schools and from the experiments carried out on the tree farms of Central Italy.* Whole districts which had been stripped of timber on the Alps have been re-forested, and in the Ardennes woods are systems of forest-farming which not only preserve the trees, but make an excellent investment on the operation. A Belgian writer residing near Ardennes says that the proprietors found that the land cultivated in trees and cut once in a hundred years—that is, the trees being selected according to their condition, and cut at the rate of 1 per cent. per annum—paid just as well as raising wheat on the same extent of land. What is wanted, then, in our forest management is the application of a vigorous system of intelligent official superintendence to the cutting of the trees, none but those marked for cutting to be allowed to be cut. This would pay even now as the management, and in the course of the not long time which will see all our unregulated forests exhausted, the forests so controlled and policed would furnish an excellent investment for the capital employed in keeping them from present destruction.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain and cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup for children teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentery and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for children teething is pleasant to the taste, and is the perscription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., will send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above,—N. B.—No risk is incurred, as thirty days' trial is allowed.

A Stir in Northwest Lumber.

The Winnipeg *Times* of a late date says :—There is every prospect of a very lively summer in the lumber business, says the *Progress*. There are greater chances of the water being higher than last year, owing to the fact that the ice has never settled all winter. The Rainy Lake, Winnipeg and Keewatin lumbering companies will all operate on an extensive scale next summer. If the water remains high a great number of logs, which have been lying on the banks for the past year, will be towed down to Rat Portage. Nearly seventeen million feet of logs are lying on the American side of Rainy river, awaiting transport. Major Camp, of Minneapolis, says he has an interest in 100,000,000 feet of timber which is tributary to the Lake of the Woods, and must eventually find a market at Rat Portage, but does not expect that it will be touched for some time yet.

Clearing a Log Jam of 25 Years Ago.

About 26 years ago a man named Easterbrook was running 1,000,000 feet of logs from the upper waters of the Shiawassee river, Michigan, to Saginaw, when the logs stuck in the narrows about seven miles from Chesaning, Mich., and the jam could not be broken. The logs made a dam in the river, and year by year the river formed a new channel until the old channel gradually filled up. A sand bar formed for two miles back of the dam, and there is now a growth of oak and elm trees two feet through on the bar formed by the jam of more than a quarter of a century ago. At every flood the land for several miles in that vicinity is overflowed, and the roads are rendered impassable. Six years ago efforts were commenced to have the obstruction cleared away, and the contract has recently been let to H. C. Thayer, of Chesaning, for $4,000.

Reducing Lumber Rates.

The executive committee of the Southwestern Railway Association decided at its last meeting to reduce the rates on lumber from Chicago to western points—Kansas City, St. Joseph, Atchison, Council Bluffs and Leavenworth—from 15 cents to 10 cents per hundred, and Commissioner Midgley ordered the reduction to go into effect on Wednesday, February 6, so that the lower rates are now in force. At the same time, rates from the Mississippi river between St. Louis and Rock Island to the same western points were reduced to a uniform rate of eight cents. This reduction was made on account of complaints of rate cutting on the part of the Burlington, and in order to equalize the rates and give all the roads in the association an equal chance at the business.

Minneapolis Lumber Mills.

The Minneapolis Minn., lumber mills cut 272,792,222 feet of lumber in 1883, as compared with 314,362,166 feet in 1882, a decrease of 41,569,944 feet. The total cut in 1881 was 233,500,074 feet. The number of shingles in 1883 was 90,146,200, against 138,546,000 in 1882, and 89,818,500 in 1881. The decrease in 1883 as compared with 1882 is 47,399,000. The production of lath in 1883 was 60,170,260, against 61,318,380 in 1882, a loss of 1,102,120 and against 49,253,700 in 1881. The figures show a falling off in the receipts of lumber at Minneapolis amounting to 1,545,000 and of 8,148,000 in the shipments. The steady falling off in the shipments during the last four years is the marked feature of the exhibit, however.

The Forestry Exhibition.

The Executive Committee of the coming Forestry Exhibition to be held at Edinburgh have obtained a site in every way suitable for their purpose, in the grounds of one of the large hospitals which form a conspicuous feature in the suburbs of the northern capital of the kingdom. The building itself will be erected in the park in front of Donaldson's hospital, while the outdoor exhibits will be displayed in the grounds immediately adjoining, which belong to the Governors of Heriots' hospital. The tramway line from Edinburgh to the favorite district of Murrayfield runs directly in front of this ground, and there are two railway stations within a short five minutes' walk.—*London Times.*

Chips.

RAILROAD ties and telegraph poles are in good demand throughout Michigan.

RAILROAD men report that lumber is beginning to move more freely by rail.

DAILY, HEIMBACK & Co. have put a planing mill into their saw mill at Duluth.

WITHIN three years the number of saw mills in Arkansas has increased from 349 to over 1,200.

MR. STRACHAN'S planing mill at Pittsburgh, Ont., was obliged to shut down on account of the heavy snowfall.

LARGE quantities of poplar fiber wood are being shipped from Essex county, N. Y., to a mill at Mechanicsville.

A portable saw mill has been set up near Bethel, Me., to saw a large tracts of timber that was blown down last fall.

MORE woodsmen have gone into the woods from Bay City, Mich., within the past few days than during any month since October.

A GENTLEMAN who has a great deal to do with booming logs recently stated that as logs usually laid in still water 1,000,000 feet required four acres.

SHARPLES & Co., lumber merchants at Quebec, who failed last November, have just completed a settlement with their creditors on a basis of 80 cents on the dollar.

A NUMBER of teamsters in the Ontario woods quit work during the recent very heavy snowfalls, the lumbermen refusing to pay for the extra work entailed by the snow.

THE new match factory at Gainsville, Ga., is turning out 300 gross of matches per day; everything from Georgia material except the chemicals, and part of them are Georgia production.

IT is estimated that about a million feet of logs, belonging to Snoqualmie, Washington territory, loggers went out to sea in a late freshet. The loss amounts to about six thousand dollars.

JOHN E. POTTS, of Detroit, has sold to Canada parties 72,000 acres of Michigan timber lands, situated in the counties of Otsego, Crawford, Montmorency, Roscommon, Ogemaw, Iosco, Oscoda and Alcona.

IN 1880 there were seven establishments in Maine with an aggregate capital of $439,000, and employing 2,200 people, engaged in the manufacture of wood pulp. Since that time the business is said to have increased fourfold.

A. BACKUS & Co., at Detroit, Michigan, have completed a warehouse for storing lumber, situated on Fort William street, near Tenth. It is 200 feet in extent on Fort street, and reaches back to the alley, 140 feet. It was 18 feet high, and has two stories in which lumber is stored. Four wide wagon ways extend through the length of the building. Its capacity is 4,000,000 feet of lumber.

A DREDGE is now being built at Lockport, N. Y., to be taken to Winnipeg for the purpose of dredging out Red river between that city and Lake Winnipeg. There are only about 1,000 yards of shallow water to be improved by dredging, and the construction of a dam and lock at St. Andrews, when vessels can pass from Winnipeg into the lake, and open up 350 miles of water route northward.

THE Duluth, North Shore & Southern Railroad Company is an enterprise for constructing a railroad from Duluth southwest into Nebraska. It is said to be backed by English capital, as the design is to ultimately build the road from Port Arthur to Duluth, along the Northern Shore of Lake Superior. Such a road would bring a large amount of grain to Duluth, and carry out large quantities of lumber.

MR. THOMAS PRAY, jr., until recently managing editor of *Cotton, Wool and Iron*, of Boston, has accepted the same position on the *Manufacturers' Gazette* which will hereafter be run in the interest of the cotton industry. Mr. Pray left the first named paper to follow the business of consulting mechanical engineer, and while he is an expert in this line, he is also an expert trade journalist, and such being the case, it is better that somebody else should run around the country looking after balky engines.

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Market Reports.

TORONTO.

From Our Own Corresponden!

FEB. 25.—The clogs have been taken off the wheels of trade to some extent, although it will require fine spring weather to open up the building trade to any great extent. Yet there is not much cause for complaint, taking into consideration the severe frosts and heavy snows of the present winter, and the fact that the few fine days we have had lately has had the effect of starting quite a number of new buildings in various parts of the city, tends to the belief that with the opening of spring considerably more than the usual amount of building will be gone on with, and choice building lots, except on the outskirts of the city, will soon be a thing of the past.

Trade with western Ontario is also opening up, and signs are apparent that more than the usual amount of trade will be done with western points, this will be partly due to the fact that small stocks are now being carried by western dealers and while the severe weather lasted they did not feel like purchasing, and still their stocks kept dwindling down during the winter months until there is nothing left on hand to dispose of, so that a replenishment of their stocks has now become imperative in view of the approaching spring trade. Wholesale dealers are now speculating upon the opening up of the season's trade with the American markets. Two months ago it was fondly hoped that the duties on lumber would be taken off, but that delusion is over, and if stocks at the mills are even only moderately large the coarser grades must to a considerable extent be a drug on this market. The percentage of good lumber in the stocks got out is lessening, year after year, and the total quantity manufactured is increasing, so that it is becoming a serious question what shall be done with the surplus of the coarser grades. The Americans are open to purchase our good lumber, but can do without our common during the lives of the present generation, so that in my humble opinion the only answer to the question: What shall we do with our coarse lumber? is, cut less.

On making a tour by the various yards throughout our city I find that stocks are light in most of them, more especially is this the case in bill stuff ranging from 20 to 30 feet long, some of the commonly used sizes would not be found of the length named in any of the yards in the city. Millmen do not pay that attention to the wants of the trade in getting in a good stock of logs from 28 to 30 feet, which their own interests, and that of the trade, generally warrants them in doing.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
Scantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 50
Three uppers, Am. inspection	35 00@45 50
B. M.	
1¼-inch flooring, dressed	32 00
1¼ " " rough	16 00
1¼ " " dressed	26 00
1½ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	3 00
Sawn Lath	2 50

MONTREAL.

From Our Own Correspondent.

FEB. 23.—Business here has been very dull during the past week or two, although we hear of several pretty large contracts having been given out, viz., for a church, convent and two schools. It is likely that building will be pretty brisk this summer, especially of houses of the smaller kind as rents have advanced very considerably. We continue to hear of purchases of lumber in Ottawa to some extent at last year's prices. The report is still current that the cut of lumber this year will be considerably smaller than last, but in the meantime this cannot be confirmed. Prices remain unchanged as under:

Pine, 1st quality, ℔ M	$35 00@40 00
P ne, 2nd " ℔ M	22 00@24 00
Pine, shipping culls, ℔ M	14 00@16 00
Pine, 4th quality deals, ℔ M	11 00@12 00
Pine, mill culls, ℔ M	10 00@12 00
Spruce, ℔ M	10 00@13 00
Hemlock, ℔ M	9 00@10 00
Ash, run of log culls out, ℔ M	20 00@25 00
Bass, " " ℔ M	17 00@20 00
Oak, ℔ M	40 00@50 00
Walnut ℔ M	60 00 100 00
Cherry, ℔ M	60 00@80 00
Butternut, ℔ M	35 00@40 00
Birch, ℔ M	20 00@25 00
Hard Maple, ℔ M	25 00@30 00
Lath, ℔ M	2 50@ 3 00
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 50@ 0 00

CORDWOOD.

There has been a fair quantity of wood prepared in the country districts, but the roads have been too heavy to draw it out. The demand has been very slack for the past two weeks, and any transactions have been on a very limited scale. Prices, however, are very firm as follows. We quote at the wharves ex cartage.

Long Maple	$ 7 00
Long Birch	7 00
Long Beech	6 50
Tamarack	5 50

LIVERPOOL MARKETS.

Latest mail advices state that the weather has been unusually open, but the timber trade keeps very quiet although the consumption may be considered satisfactory. Stocks contrast favorably with last year, but only very low offers will tempt merchants to increase their stocks. Spruce deals St. John, N. B., sold by private bargain at an average of £6 16s. 3d. per standard and at auction at £6 17s. 6d. which shows a steady decline since 1882 as the following comparative figures will show. St. John, N. B., spruce—1882, £7 10s. to £7 15s.; 1883, £7 5s.; 1884, £6 15s. to £6 17s. 6d.

WINNIPEG.

The Winnipeg *Commercial* of Feb. 12, says: The demand is very light and hardly worth speaking about. Quotations are:

Pine lumber, 1st, common boards, dressed	$26 50
do, 2nd, dressed	25 50
do, 1st dressed rough	26 50
do, 2nd do.	25 50
Sheating, rough	25 00
Timber 16 feet and under	24 00
do. over 16 feet, for each additional 2 feet.	1 00
Dimension and joists 16 feet and under	24 00
do, do, over 16 feet for each	1 00
Fencing	25 00
2 and 3 in. battens	30 00
A. stock boards, all widths	50 00
B. do. do.	45 00
C. do. do.	40 00
D. do. do.	35 00
1st clear, 1, 1¼, 1½, and 2 inch	60 00
2nd do. do. do.	56 00
Window and door casings	50 00
Base boards, dressed	50 00
1st pine flooring, siding and ceiling	40 00
2nd do. do. do.	35 00
3rd do. do. do.	30 00
½ inch split siding, dressed	30 00
Spruce lumber—timber 16 feet and under	22 00
do. over 16 feet for each additional 2 feet	1 00
Dimension and joists, 16 feet and under	23 00
do do. over 16 feet, for each additional 2 feet	1 00
Boards	22 00
1st flooring, siding and ceiling	28 00
XX shingles	5 25
Star A shingles	5 25
X shingles	5 00
A. do.	4 50
Lath	4 50

QUEBEC.

Notwithstanding the present winter has been generally favorable for the manufacture of timber and saw logs, the supply for next season of almost all sorts of timber and lumbez will be very much less than last year. This is accounted for by the fact that prices have declined to a point that leaves the limit holders and millmen little or no margin of profit, and in many cases a serious loss,—hence they prefer leaving the timber standing rather than face the markets with so unsatisfactory an outlook,

There has been six weeks of excellent sleighing in Ohio and Michigan, and all the timber manufactured this winter will be got out, but the recent floods in Ohio have of course put a stop to the supply of oak, which will not exceed 700,000 feet, or considerably less than one-half of what was made last year.

Elm is exceedingly difficult to procure; there is now little rock elm remaining in Canada large enough for square timber. Owing to the enhanced value of this wood, the supply will be somewhat larger than last year, including about 150,000 feet from Michigan. The supply will be much under the average of the last five years,—most of this will be late in arriving in port,—and as the stock wintering is extremely small, there will no doubt be an active demand for it early in the season.

RED PINE.—The supply this year will not be over 150,000 feet. Pitch pine seems to have run this description of wood out of consumption in the English markets.

WHITE PINE.—The supply will be about two-thirds of what it was last year in square and waney, but as a large portion of it is made at a long distance from navigable waters the chances are that the whole of it will not reach Quebec next season.

SAW LOGS.—There is an enormous decrease in the estimated supply of pine logs. On the Ottawa, it is said, there will be over 1,500,000 logs less than last year, which, at an average of 140 sper. feet to the log, will be equal to 210 million feet of lumber. On the St. Maurice we learn the supply will not exceed one-third of what it was last year. This leads us to believe that pine deals have touched bottom, and when we consider that the Montmorenci mills will in all probability be closed up next season, we should not be surprised to soon find an upward movement in prices. If the United States duty on lumber is repealed, there will no doubt be a smart advance, particularly in the lower grades.

Spruce deals are now selling at a price that many millmen say does not cover cost of manufacture, allowing nothing for the wood. We understand the supply will be considerably less than last winter.—*Quebec Chronicle.*

MANITOBA.

"The lumbering interests on the Lake of the Woods" says the Manitoba *Free Press*, "are not as active this winter as in previous years, but from the quantity of logs left over from last season, there is every prospect of a fairly active summer at Rat Portage. Bulmer & Co. are at work in the woods, getting out 2,500,000 feet of logs which, with 2,000,000 previously on hand will keep their mill pretty busy. The Rainy Lake Company may not have their mill rebuilt in time for this season's operations. The Winnipeg Lumber Company and Camp & Walker of Minneapolis have a large number of logs on the American side of the Rainy Lake. The Keewatin Lumber Company have not cut any this winter, saisfied that the five or six million feet of logs they have on hand will be sufficient to meet the demand for lumber this year. On the whole, however, matters look very satisfactory.

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ℔ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	45 00@50 00
Pine, good box	22 00@33 00
Pine, 10-in. plank, each	00 42@00 46
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 21
Pine, 10-in. boards, 16 ft., ℔ M	28 00@32 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	18 00@20 00
Pine, 1-in. siding, select	43 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@85 00
Cherry, common, ℔ M	25 00@35 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	38 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 4 90
" clear, "	0 00@ 3 30
" cedar, mixed	0 00@ 3 50
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ℔ M	0 00@ 2 75
Lath, spruce, "	0 00@ 3 00

CHICAGO.

The *Northwestern Lumberman* of Feb. 27, says:—As spring approaches holders of lumber begin to manifest some anxiety about the effect of the opening season on prices. This anxiety is clearly manifest from Boston to St. Paul. A heavy stock, especially of coarse lumber, was carried into the winter after a season of hard pushing, to make profitable sales. It was felt that the old tub of trade had been grinding on the bottom all the season, and it was a source of relief when the grip of winter froze the rivers, lakes and canals, and congealed trade at the same time. But the grip held a little two long, the winter has been dull in most markets and at the East does not start yet. Contrary to general expectation, also, the log crop is going to be large. There is no ground to hope for a meagre supply of lumber. The signs are plain for another season of heavy mill output. As a consequence of apparent conditions the injury is everywhere met, "What do you think about prices the coming spring; will they remain steadfast about the present range, or will they go lower?" It is to be noticed that there is never a suggestion of possibly higher prices. This is significant. It indicates a knowledge of large stocks on hand, of heavy expected output, and offerings to sell beyond the capacity of the country to absorb.

It is barely possible that the holders of lumber are, at the present, underestimating the coming demand for their stock. It may be strong enough to maintain values at about their present range, though an advance can hardly be expected, no matter how good the demand may be, for it is likely that the capacity of the mills and the disposition of their owners is such as to prevent any scarcity of lumber. The absence of a speculative tendency in all lines of trade, and weakness of prices shared by all other commodities, must, as long as such conditions continue, have an influence on lumber prices, and prevent them from making any considerable advance. Besides, the general observation is as pat here as anywhere, that lumber seldom advances in the spring.

The conclusion is that there will be plenty of lumber for sale—fully equal to the demand—a large consumption in house building, and a range of prices not much different from those now prevailing, though a little lower towards summer on all common grades.

Receipts of lumber, shingles, etc., for the week ending Feb. 21, as reported by the Lumberman's Exchange:—

RECEIPTS.	*Lumber.*	*Shingles.*
1884	3,850,000	653,000
1883	1,023,000	1,693,000

FROM JANUARY 1, 1884, TO FEBRUARY 21, 1884, INCLUSIVE,

RECEIPTS.	*Lumber.*	*Shingles.*
1884	23,332,000	3,369,000
1883	17,093,000	8,374,000
Increase	6,239,000	
Decrease		5,005,000

STOCK ON HAND FEB. 1.

	1884.	1883.	1882.
Lumber	583,228,906	600,572,673	471,350,108
Shingles	437,745,250	273,964,750	200,800,347
Lath	62,566,998	65,176,314	46,691,923
Pickets	1,516,999	3,044,790	3,082,823
Cedar posts	453,436	87,260	183,469

OSWEGO, N. Y.

From Our Own Correspondent.

We cannot change quotations excepting on coarse lumber, which seems to be in excess of demand, and is being sold at ruinous prices, probably to make room for spring arrivals. Trade continues dull, the weather being very unfavorable for outdoor work:

Three uppers	$45 00@46 00
Pickings	35 00@36 00
Fine, common	20 00@25 00
Common	13 00@16 00
Culls	10 00@13 00
Mill run lots	14 00@18 00
Sidings, selected, 1 inch	30 00@35 00
1¼ inch	30 00@36 00
Mill run, 1x10, 12 inch	17 00@19 00
selected	22 00@26 00
Shippers	13 00@16 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@12 00
1x6 selected for clapboards	22 00@35 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 25@ 3 50
Lath	2 00@ 2 25

BOSTON.

Cotton, Wool and Iron of Feb. 21, says:—The weather has been unfavorable to general trade, but as the season advances and building plans develop it is evident that there is to be a very fair average call for soft lumber during the spring. Prices seem to keep along just about the same as of late. In yellow pine there has been a good deal doing of late on large schedules for both foreign and domestic use. Hard-

woods are having a very good call. The demand for whitewood is improving. Desirable grades of walnut are moving well. Ash holds its own. Choice cherry is in request. Clear maple for flooring also goes quite well.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

LONDON.

The *Timber Trades Journal* of Feb. 9, says: From Canada, owing to the flatness of trade out there, great difficulty is being experienced by shippers and their agents in passing over their first open water stocks, notwithstanding these are understood to be short. The rates for tonnage to the United Kingdom from Quebec and Three Rivers, &c., are 60s., and from the Lower ports, 57s. 6d., and the prospects of improvement seem entirely dependent on the sales made to this country. It is a welcome feature the intelligence that the colonial stocks are light, as, by the present outlook, we shall not require much over here.

LIVERPOOL.

The *Timber Trades Journal* of Feb. 9th, says:—There is a fair and steady business done, and, although no large orders are in the market, the consumption of timber and deals progresses in a manner not unfavorable. Doubtless the present extraordinary mild and open weather has had considerable influence upon the trade, for building operations and public works have progressed without interruption thus far into the new year.

The import continues light, and has been limited to two cargoes of pitch pine and one cargo of Nova Scotian spruce deals and birch timber, in addition to the usual consignments per steamers from the United States.

The market continues without material change in prices, although spruce deals are firmer and an advance has been made in these goods. The stock is now about the same as at this time last year, whilst there is a much smaller import, with a probability of its continuing so; it is therefore not unreasonable to presume that prices will stiffen.

GLASGOW.

The *Timber Trades Journal* of Feb. 9, says: There has been within the past week one public sale of timber held at Greenock. There was a fair company and a good many lots were disposed of by the brokers, Messrs. Allison, Cousland & Hamilton.

A general feeling of quietness in the trade is at present experienced, but as imports are meantime almost nil, and a considerable consumption of wood going on, joiners and other wood-workers being very well employed, an improvement in the market may be expected as the spring advances.

At a meeting of the Clyde trustees, held on Tuesday, a return was ordered to be made of the amount of timber dues at the Yorkhill Wharf, and the rental per square yard of the whole of the ground at Yorkhill and Kelvinhaugh, belonging to the trustees, from the storage of timber there; also a return of the probable cost of a dock at Yorkhill and Kelvinhaugh, and the probable return of dues from such dock.

Mr. James L. Mitchell (of Messrs. Edmiston & Mitchells) next moved to the effect that the amount of dues paid on wood goods of all kinds for the year ended on the 31st of December, 1883, and also for a return of dues on live cattle for same period and the rents exigible from [illegible]th. The dues levied on mineral ore, it was also moved, should be included in the return. The object of these motions is evidently to ascertain the relative importance of the different kinds of traffic specified.

TYNE.

The *Timber Trades Journal* of Feb. 9, says: The arrivals of wood goods during the last seven days have been very small, and with the exception of a parcel of American doors per Japanese SS. from New York, and a parcel of about 50 standards floorings from Christiana by the regular boat, do not call for any special comment.

The terribly boisterous weather has prevented some of the Gothenburg boats coming forward, the August Blanche having been obliged to put back and repair at Gothenburg.

Trade remains in the same quiet condition, and the prospect is certainly not very reassuring.

Be Somebody.

Robert J. Burdette, the facetious editor of the Burlington *Hawkeye*, has been lecturing to large audiences in different parts of the country, and in his amusing style he imparts to the rising generation some wholesome advice. The following is from one of his lectures:

"Be somebody on your own account, my son, and don't try to get along on the reputation of your ancestors. Nobody knows and nobody cares who Adam's grandfather was, and there is not a man living who can tell the name of Brigham Young's mother-in-law." The lecturer urged upon his hearers the necessity of keeping up with the everyday procession, and not pulling back in the harness. Hard work never was known to kill men; it was the fun that men had in the intervals that killed them. The fact was, most people had yet to learn what fun really was. A man might go to Europe and spend a million dollars, and then recall the fact that he had a great deal more fun at a picnic twenty years ago that cost him just sixty-five cents. The theory that the world owed every man a living was false. The world owed a man nothing. There was a living in the world for every man, however, provided the man was willing to work for it. If he did not work for it, somebody else would earn it, and the lazy man would "get left." There were greater opportunities for workers out West than in the Eastern cities, but men who went out West to grow up with the country must do their own growing. There was no browsing allowed in the vigorous West. An energetic man might go into the far West, and in two or three years possess himself of a bigger house, a bigger yard, a bigger barn, and a bigger mortgage than he could obtain by ten years' work in the East. All young men ought to marry, and no young man should envy old men or rich men. In conclusion, Mr. Burdette said that a man should do well whatever he was given to do, and not despise drudgery.

A Kerosene Ship on Fire.

When the American ship Aurora took fire at Calcutta a few days ago, there were 30,000 cases of kerosene abroad, and it was feared the wind and tide would drive the burning oil to a crowded part of the river. Fortunately the wind shifted and the flaming liquor was driven upon the beach. The scene was wonderful beyond description. The river seemed to be on fire. The cases exploded with a sound like volleys of musketry, and a dense black smoke enshrouded the town. The escape of the shipping and town from a disastrous conflagration was very narrow. The event has revived the scheme for the establishment of a subsidiary port for kerosene ships.

Proposed Canal in Tartary.

It is stated that Russia has invited England to join in constructing a canal from the sea of Aral to the Indian frontier.

THE Winnipeg *Times* of Feb. 21, says:—The office of Messrs. Patterson & Mitchell, of the North Star planing mills, has been fitted up with a very handsome counter and screen, made of all kinds of hardwoods and designed by G. L. Mitchell. This is the first of such work executed in this city, it having been procured from St. Paul and Minneapolis heretofore.

The Improved CLIMAX Sash Lock

MANUFACTURED BY MILLER BROS., GUELPH.

Holds the Sash in any position so that it cannot be moved either up or down, can be put on by anyone, only requiring two screws.

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JONES & SON,

Wholesale Lumber & Timber Dealers

39 Broadway, NEW YORK.

Oak, Ash, Cherry, Black Walnut, Poplar, Butternut

And all other Kinds of HARDWOOD LUMBER.

White and Yellow Pine Lumber and Timber.

Oak Ship Plank and Timber. Pine Deck Plank and Ship Stock Generally. L7

J. S. MAYO

IMPORTER AND MANUFACTURER OF

MACHINE OILS

OF EVERY DESCRIPTION.

9 Common Street, Montreal.

AMERICAN LUBRICATING OILS A SPECIALTY.

As I carry the LARGEST and BEST assorted Stock of OILS in the Dominion, I am prepared to fill all orders Promptly and at

LOWEST MARKET PRICES.

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WARNING. — If troubled with constipated bowels, never neglect it, or the system becomes clogged, the secretions dried up and the system poisoned with foul gases. Burdock Blood Bitters cure constipation by unlocking the secretions and regulating the glandular system.

HOPE IN HOPEVILLE.—Mrs. McArthur, of Hopeville, declares she could not keep house without Hagyard's Pectoral Balsam. It is a remedy in which the sufferer may safely hope for speedy relief and effectual cure of Coughs, Hoarseness, Bronchial, Throat and Lung Troubles, which neglected end in hopeless consumption.

GREAT EXCITEMENT.—There is always great excitement in case of sudden accident and injury. Everyone should be prepared for an emergency. Hagyard's Yellow Oil is the reliable friend in need; it is for internal and external use, curing Burns, Scalds, Bruises, Lameness, Croup, Sore Throat, Rheumatism and painful affections and wounds.

A PRIZE. Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All, of either sex, from first hour. The broad road to fortune opens before the workers, absolutely sure. Address TRUE & Co, Augusta, Maine

HAGYARD'S YELLOW OIL CURES RHEUMATISM

FREEMAN'S WORM POWDERS.

Are pleasant to take. Contain their own Purgative. Is a safe, sure, and *effectual destroyer of worms* in Children or Adults.

MONTREAL AXE WORKS

T. J. MOCOCK & Co.

St. Gabriel Locks, - Montreal,

—MANUFACTURERS OF—

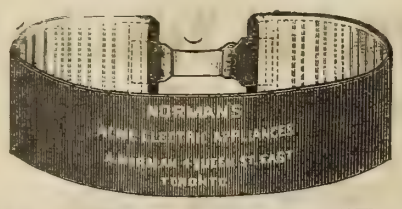
AXES and EDGE TOOLS

OF EVERY DESCRIPTION.

Old and Reliable, the Best Axes made in Canada.

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Established 1874.



Established 1874.

NORMAN'S ELECTRO CURATIVE APPLIANCES

RELEIVE AND CURE

Spinal Complaints, General and Nervous Debility, Nervousness, Rheumatism, Gout, Liver, Kidney, Lung, Throat and Chest Complaints, Neuralgia, Bronchitis, Incipient Paralysis, Asthma, Sciatica, Sprains, Consumption, Sleeplessness, Colds and Indigestion.

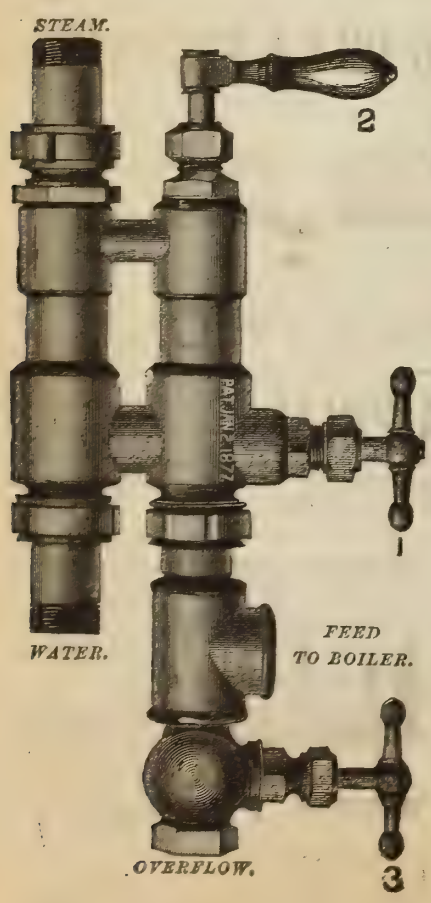
Ask for NORMAN'S ELECTRIC BELTS and you will be safe against imposition, for they will do their work well and are cheap at any price.

A. NORMAN, ESQ.—Dear Sir,—Please send me a waist belt. Enclosed find price. Head band I got for my wife has almost cured her of neuralgia. Yours truly,
C. L. TILLEY, WATERVILLE, N.B.

Numerous of such testimonials can be seen at my office, proving that they are doing a good work and worthy the attention of all sufferers. Circulars free. No charge for consultation.

A. NORMAN, 4 Queen Street East, Toronto.

NORMAN'S ELECTRO CURATIVE TRUSS is the best in the world. Guaranteed to hold and be comfortable. Circular free. N.B.—Trusses for Rupture, best in America, and Electric Batteries always on hand at reasonable prices.



THE

Hancock Inspirator

The Best Feeder known for Stationary, Marine or Locomotive Boilers.

THE INJECTOR PERFECTED!

All Sizes lift water 25 feet. No adjustment required for varying Steam Pressures.

Over 50,000 Now in Use.

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Hancock Inspirator Co'y

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MONTREAL, P.Q., CANADA.

Manufacturers of Inspirators, Ejectors, and General Jet Apparatus.

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EAGLE FOUNDRY!

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14 to 34 King and Queen Sts, MONTREAL,

MAKER OF

Steam Engines, Steam Boilers, Hoisting Engines, Steam Pumps,

CIRCULAR SAW MILLS, BARK MILLS, SHINGLE MILLS,

Water Wheels, Mill Gearing, Shafting, Hangers and Pullies,

Hand and Power Hoists for Warehouses &c., &c.

Also, Sole Manufacturer of BLAKE'S CHALLENGE STONE BREAKER.

AND AGENT FOR 1yl21

"Water's" Perfect Steam Engine Governor, and "Heald & Sisco's" Centrifugal Pumps

EXTRA HEAVY AMERICAN

Oak Tanned Leather Belting.

RUBBER BELTING, RUBBER PACKING, RUBBER HOSE, LINEN HOSE and COTTON HOSE.

☞A Full and Complete Stock always kept on hand. ☜WRITE FOR PRICES and DISCOUNTS.

We have the Largest and best equipped RUBBER FACTORY in the world for the manufacture of VULCANIZED INDIA RUBBER GOODS for Mechanical Purposes.

Our trade here has increased to such an enormous extent that in order to keep up with the demands, we have purchased from Major John Gray, M.P.P., Parkdale, the plot of ground situated on West Lodge Avenue, adjoining the Credit Valley, Toronto, Grey and Bruce, Northern and Grand Trunk Railways, for the erection thereon of a BRANCH RUBBER FACTORY, works to be in full operation January 1st, 1884.

THE GUTTA PERCHA AND RUBBER MANUFACTURING CO.

T. McILROY JR.

WAREHOUSE:—10 and 12 King Street East,

P.O. BOX 556. 1L6m TORONTO.



THE TRADE

Will always find a Large Stock of

SHANTY BLANKETS

In every Size and Weight, and

HORSE BLANKETS

AT LOWEST MILL PRICES.

JOHN MACDONALD & Co.

TORONTO.

A Magnificent Line of All Wool Fawn Blankets.

SAMPLE ORDER WILL HAVE OUR BEST ATTENTION.

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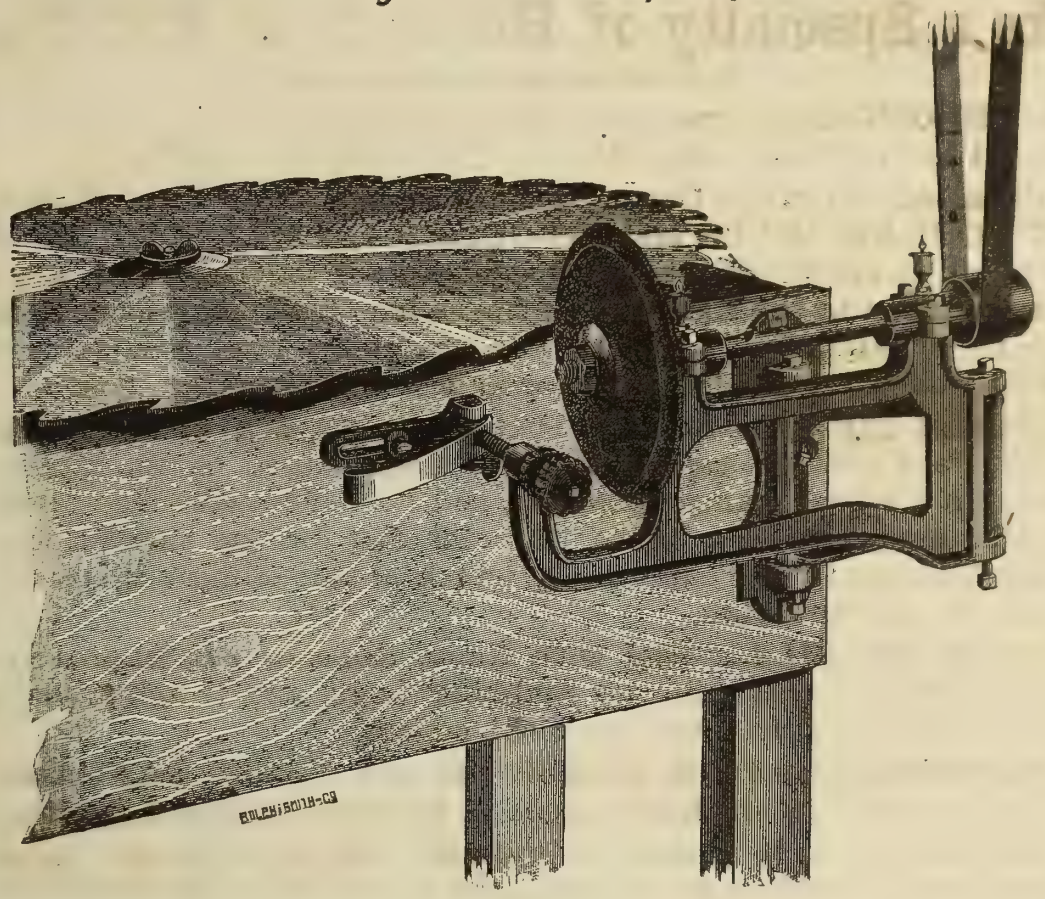
ROGERS' PATENT
SAW GUMMER and SHARPENER

The Handiest Machine for these purposes ever Invented.

Don't Heat!

Cheap!

Very Simple!



Accurate!

Works Fast!

Complete!

Lumbering Season, 1884

Saw Mill Owners in providing for the season of 1884, ought not to lose sight of ROGERS' SAW GUMMER for it will save them more money in proportion to the amount invested than any other machine.

Only $30, including Emery Wheel; Table and Countershaft, $10 extra.

A few of ROGERS' SAW GUMMERS were put on the market last season, and we quote some of the commendations received:

JAS. HADDEN, Foxmead, says:—
"Your machine is all I expected."

CHAS. ANDERSON, Anton Mills, says:—
"I have given it a good trial, and am well pleased with it. "I find it is one of the indispensables in a saw mill." * *

ROBT. R. WEIR, Orillia, writes:—
"It works like a charm, and is very accurate in its work."

CRONE & PATTON, Hoc Roc Mills, Gravenhurst, says:
"The Rogers' Saw Gummer purchased from you gives "good satisfaction, * * it cannot be beat."

D. DAVIDSON, Pentanguishene, writes:—
"We are well pleased with the Gummer."

W. W. BELDING, Wyevale, writes:—
"I have the Gummer running and it is giving good "satisfaction."

ADDRESS ALL ORDERS TO THE

Hart Emery Wheel Company, Limited - Hamilton, Ont.

☞Manufacturers of Hart's Celebrated Patent Wire Strengthened Emery and Corundum Wheels.

The William Hamilton Manufacturing Co'y

MANUFACTURERS OF (LIMITED,)

SAW MILL & GENERAL MACHINERY

We make a Specialty of Heavy Saw Mill Machinery.

OUR SAW MILL ENGINES are made Strong, Neat, and Durable, knowing well the ever varying strain they are subjected to in driving a Saw Mill.

We wish to call the attention of our Canadian Lumbermen to our First Class HEAVY SAW MILL MACHINERY for CIRCULAR MILLS and CIRCULAR and GANG MILLS of the most improved designs. We are prepared to submit Plans and Specifications, together with any information that our many years of close application to the Saw Mill Business may have suggested to us, also when required to enter into contract for building and supplying the machinery complete, superintending the starting of the same, and handing over the mill to its owner in first-class running order.

OUR HEAVY SINGLE CIRCULAR SAW RIG, Complete, with or without Top Saw, Rack, Rope, or our Improved Steam Feed (Patent applied for), is acknowledged by our leading lumbermen to be a first-class article, got up in the best manner possible, and furnished with Headblocks and Dogs to suit our Customers. We also manufacture a lighter Circular Rig for the smaller class of mills (or where there are two circulars required in the same mill), which is exceedingly smart in its movements, and supplies a long felt want in this direction.

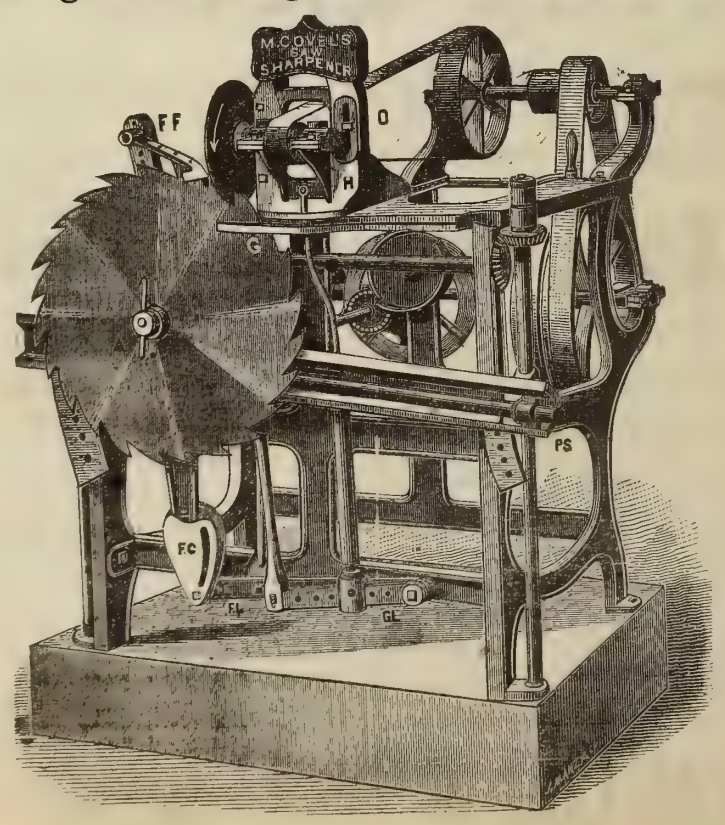
OUR PATENT TWIN CIRCULAR RIG with Rack, Rope, or our Improved Steam Feed (Patent applied for), is now the favourite Machine for Slabbing Logs, and is acknowledged by all to be the smartest and the best Machine for this purpose in the market.

OUR IRON FRAME OSCILLATING, SLABBING and STOCK GANGS are fitted up with the most improved Machinery, which for Strength, Class of Workmanship and Design cannot be excelled.

OUR DOUBLE EDGER is the best, most useful and most substantial article of the kind in the Market, which is proven by the number we are called upon to supply; we put on any desirable number of saws on the Spindle; they can be arranged to suit the work especially required to be done. We also furnish them with one or two Guages for sawing Scantling or re-sawing Lumber.

Our PATTERN WROUGHT IRON ENDLESS LOG CHAIN for drawing up logs, keeping a constant supply of logs in the mill, and requires, from its construction, very little power to drive it. We have furnished the majority of the best Mills in Canada with this Chain, and many Mills in the United States are using it. We also supply when required Trout's Log Counter (Patent applied for), to count the logs as they are drawn into the Mill. By this simple device the proprietor is able at a glance to know at any time during the day how many pieces have been cut, thus enabling him to judge if the Mill is up to her work.

Our most improved LOG CANTERS for Turning Logs on Carriage. We also furnis 1 them with Weirs' Patent Incline Attachment for rolling logs from Skids on to Carriage.



We still continue to manufacture

THE

Scovell Saw Sharpener

with all the latest improvements, which Machine has only to be known to be appreciated.

We also manufacture LATH MACHINES, LATH BOLTERS, LUMBER TRIMMERS, LUMBER MARKERS, SLASH TABLES, TIMBER CANTERS, LOG DECK CANTERS, SHINGLE MACHINES, KNOT SAWS, DRAG SAWS, SHINGLE JOINTERS, BOLTERS, WATER WHEELS, and a variety of the best kinds of Wrought Iron Refuse and Sawdust Carrier Chain (that can be relied on to do their work). Everything required in a first-class Saw Mill.

PETERBOROUGH, ONTARIO.

—IT WILL PAY YOU—

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Canada Lumberman

FOR THE FOLLOWING REASONS:

1. It is the only newspaper published in the Dominion of Canada devoted to the lumber and timber industries.
2. It is devoted to the development and utilization of our forest wealth.
3. It furnishes complete and reliable quotations of prices of lumber in all the leading markets.
4. Its columns are filled with interesting reading matter, valuable alike to the land owner, manufacturer or dealer.
5. It costs only $2.00 per year to have it sent, post-paid, to any address in Canada, and no land owner, lumber dealer, manufacturer or individual in any way connected with timber industries, can afford to do without it.

☞TO ADVERTISERS.

It has a circulation among saw mill owners, manufacturers, lumber and timber dealers and all classes connected with the timber business.

Examine the field, count the cost, and you will at once decide that the CANADA LUMBERMAN is the

——CHEAPEST, BEST, MOST RELIABLE and ONLY TRUE MEDIUM——

for placing your goods or wares before the saw mill men and lumber and timber dealers of the Dominion.

AMERICAN SAWS:

We represent Four of the Best American Saw Factories

VIZ.

AMERICAN SAW Co.

Emerson, Smith & Co.

R. HOE & Co.

Hubbard, Bakewell & Co.

Inserted Tooth, BIT TOOTH,

AND

SPECIALLY

THIN SOLID SAWS

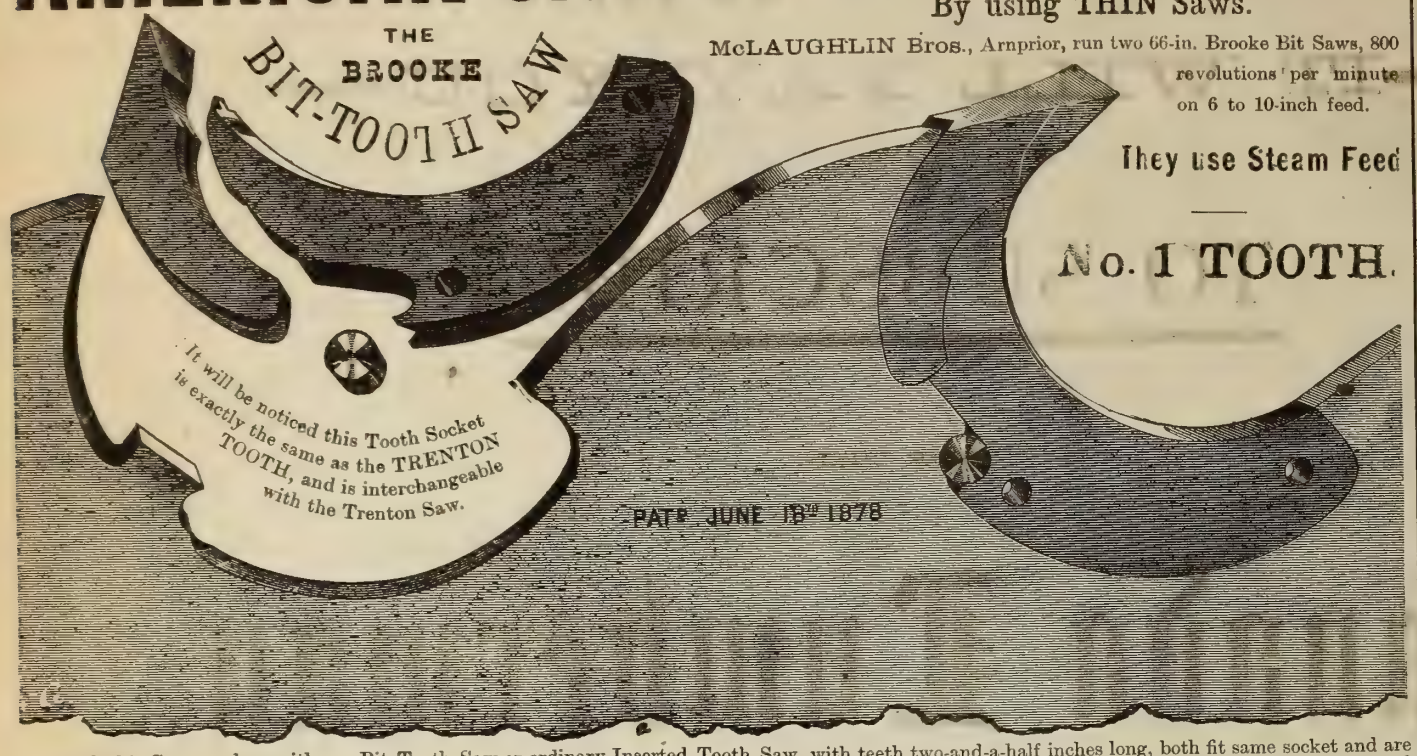
We run 60-inch to 72-inch Solid Saws, as thin at center as 10 guage at rim—saving, over a 7 guage saw—1000 feet of lumber in every 25,000 cut.

☞SAVE YOUR TIMBER
By using THIN Saws.

McLAUGHLIN Bros., Arnprior, run two 66-in. Brooke Bit Saws, 800 revolutions per minute on 6 to 10-inch feed.

They use Steam Feed

THE BROOKE BIT-TOOTH SAW



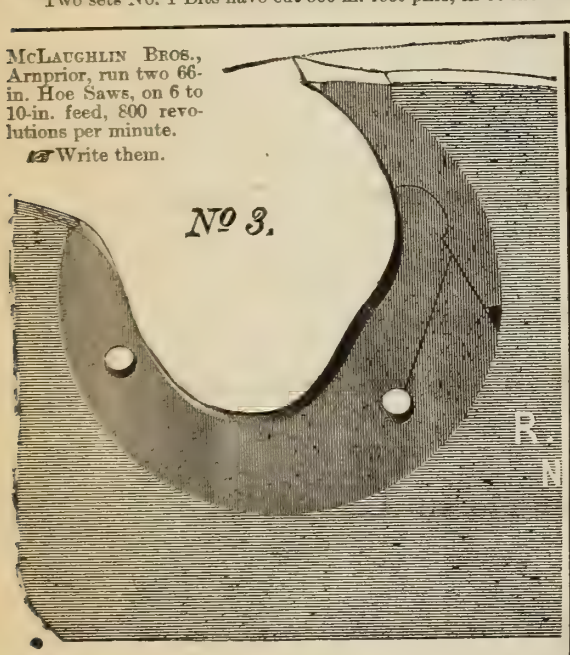
No. 1 TOOTH.

With this Saw you have either a Bit Tooth Saw or ordinary Inserted Tooth Saw, with teeth two-and-a-half inches long, both fit same socket and are interchangeable in a few minutes. These Bits require no gumming, and very little filing; are so firmly held that they will stand all necessary swaging, and can be worn down to dotted line shown in cut; they rest on lugs, saving the strain on the rim of the saw. For these reasons they will cut more and better timber at less cost than any other tooth. **EXTRA BITS (per 100) No. 1. $9; No. 2,$8.— (per 1000), No. 1, $80, No. 2, $70.**

Two sets No. 1 Bits have cut 500 m. feet pine, in 60-inch saw, running 800 revolutions per minute, on 6-inch feed. E. E. PARSONS, Arnprior.

McLAUGHLIN Bros., Arnprior, run two 66-in. Hoe Saws, on 6 to 10-in. feed, 800 revolutions per minute.

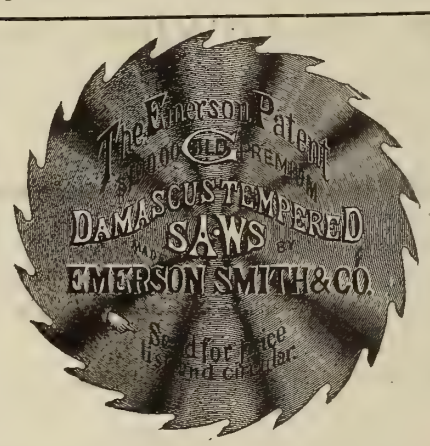
☞Write them.



HOE'S PATENT BIT SAWS.

One of the best Bit Saws made, above cut repesents usual size tooth, one size larger and smaller made. ☞Send for particulars and prices.

SAVE TIMBER



GROW RICH

EMERSON'S EXTRA THIN SOLID SAWS

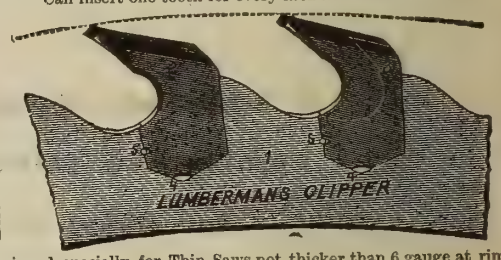
Having special facilities for the manufacture of extra thin saws for board mills, we are prepared to receive orders for Circular Saws as follows:—54 inches in diameter, as thin as 12 guage at rim and 11 at center, 54 to 56; 11 guage at rim, 10 at center, 66 to 72; 10 at rim, 9 at centre. Our unparelleled success with thin saws during past few years has induced us to recommend them to our customers. Our superior facilities are:—1st, **Evenness of Temper**; 2nd, **Perfect Accuracy in Thickness**, Saw balances perfectly; 3rd, **Properly Hammered**, to have equal strain in all its parts and at same time run true. This department is under the special supervision of J. E. Emerson, who has had 30 years experience and is without doubt the most successful circular saw maker in the world.

☞NO EXTRA PRICE FOR THIN SAWS.☜

EMERSON'S LUMBERMAN'S CLIPPER SAW

Can insert one tooth for every inch in diameter of Saw.

Extra Teeth 25c. each.



Extra Teeth 25c. each.

Designed specially for Thin Saws not thicker than 6 gauge at rim, or thinner than 15 guage at rim.

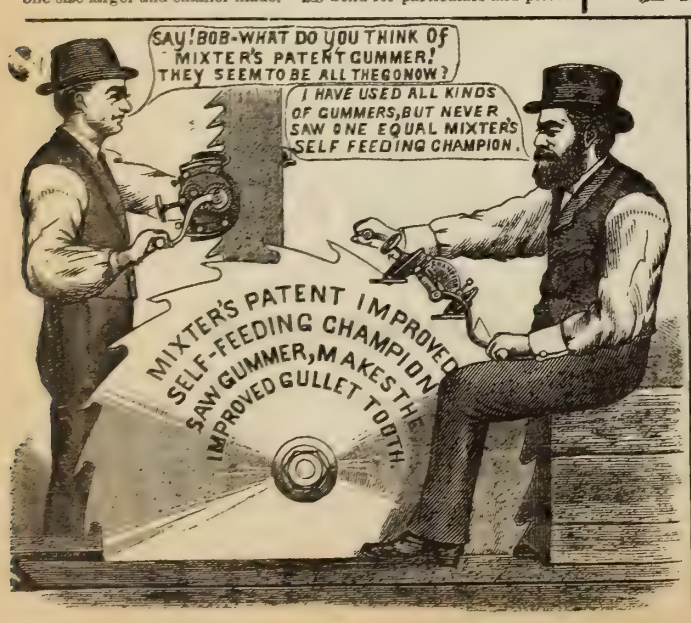
The CLIPPER FLANGE SAW

EXPRESSLY FOR HEAVY FEED.

Extra Teeth 50c. each.

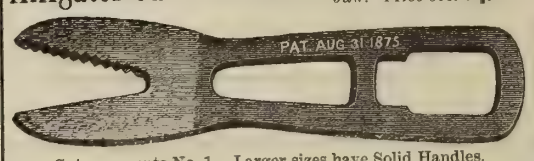


Two and a half inches long



Alligator Jaw Wrenches

5 sizes, grip from ½ to 3 inches. Iron. Solid Steel Jaw. Price 50c. to $5 50.



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JARECKI'S PATENT SCREW, PLATE, and PIPE CUTTER, ½ inch to 2 inches, $28.00; smaller ranges in proportion

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SAW GUMMERS:—Stone's Original, large and small size; Mixter's Self-feeding Champion; Emery Wheels and Stands.

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VOL. 4. **PETEROROUGH, ONT., MARCH 15, 1884.** **NO. 6.**

A NEW LUMBER PROJECT.

The international bridge between Port Erie, Ont., and Black Rock crosses an inland in the Niagara river known as Squaw Island, containing about 500 acres of good land, with a large and valuable frontage on the river and Black Rock harbor. A railway company has been recently organized under the title of the Squaw Island Railway Company, who are taking steps to acquire possession of the island, it is said with the object of building it up with wharves and docks and making it a great railway and shipping point for lumber and freight. The Squaw Island Railway Company is believed to be the New York Central and Hudson River railway under a new title, and to them in a few years the island would be worth several millions of dollars. The Grand Trunk, which virtually owns the International bridge, a possession which, as previously stated, crosses the island about its centre, and various property owners along the river front down to Tonawanda, which is ranking high as a lumber port, and whose property is threatened by this move, as well as various other railroads, will probably bitterly contest the proceedings for the confiscation of the island, and a long legal fight will possibly follow the contest.

TREES FOR COLD CLIMATES.

The special committee of the House of Commons on agricultural industries met on Friday morning, Mr. Gigault in the chair, when Mr. Charles Gibb, of Abbotsford, P. Q., was examined. Mr. Gibb has travelled in Great Britain, Germany, Russia and other European countries, making particular observations regarding their horticulture, and he is also the author of a pamphlet entitled "Fruits of the Cold North; a report on Russian fruits, etc." In his opinion the great obstacle to the introduction of fruits into the Northwest was the coldness of the climate, and, in Manitoba at least the conditions of the sub-soil. The country was such a vast one that there were totally different soils and climates in different parts of it, and a tree which might thrive well at Medicine Hat might not grow at all in Winnipeg. He thought the Government should encourage the horticulture of the country in the way it was encouraged by the Governments of Germany and Russia, viz., by the establishment of experimental farms or gardens, with a view to testing the kinds of trees which would best suit the different localities and by distributing those most suitable throughout the various localities. Southern trees would not thrive well in northern climes, but there was good reason for believing that the trees which throve well in Germany and Russia would thrive well here. These trees should be imported, tested in the experimental grounds, and sold to the people of the neighborhoods. At first trees of quick and easy growth should be tried. Of the non-fruit bearing trees required in the North-West, it would be well at first to import the white willow, the white silver poplar, the white ash, the Norway spruce and other hardy and rapid growing varieties. For the northwest the question was to obtain trees which would mature as soon as possible. Throughout Europe, forestry was looked upon as a subject of great importance. The government of Russia owned and managed over 200 hundred forestry stations, and there are numerous plantations of fruit trees under the control of the Government of Russia, Germany and other European countries. While in Russia Mr. Gibb spent about three months in what are known as among the coldest habitable regions of the earth, and he found there fruits which flourished. At points in which the temperature ranged considerably lower than it does in Canada, he found excellent fruit in apples and pears and cherries in great quantities, and the trees which produced this fruit were suited to the climate and need no special care, and there was no reason to doubt that if transplanted in this country they would prove equally vigorous and plentiful. They should be imported here in quantities? In Germany all the school teachers were required to known something about horticulture. Each teacher was provided with a little plot of land in which he was expected to impart instruction, in a practical way, to his pupils. Botanic gardens were established in all parts of the world; and have been the means of advancing the horticulture, not only of Europe and Asia, but of Australia, the East and West Indies, Iowa, Minnesota, etc. Our lack was not so much a lack in culture as it was of the varieties of fruit suited to our climate—varieties which we can grow to a profit. If we had an experimental garden or plantation, we could import from Russia and Northern China the varieties we required, we could test and propagate them here, and they could be distributed to the great advantage of the country. In Iowa there were eight or ten of these experimental gardens, and in Minnesota as many more. Ottawa would be a very good place for a central garden of this kind; and smaller ones might be established in different directions throughout the country. Ten acres would at first be sufficient for the proposed garden; but he (Mr. Gibb) would like to have another ten acres alongside to be made available at pleasure. Of course they should be under the control of practical horticulturists and not in the hands of politicians. Well managed, they would afford the means we so much needed of introducing new, suitable and improved varieties of fruit trees into the country. In conclusion, Mr. Gibb said it would be advantageous to distribute handbooks throughout the country; and spoke f the hardy varieties of excellent wheat he saw in Russia, which, he thought, should be imported into and tested in Canada. He also referred to the success with which the Russians cultivated the sugar beet, and said that almost all the sugar used in Russia was the product of the beet.

CURTAILMENT OF SWEDISH SUPPLY.

We are to-day (*Stockholms Dagblad*, Feb. 11) enabled from fully reliable sources, to inform our readers of an important resolution agreed to by our timber exporters. As mentioned in the yearly report of the Saw-mills and Timber Export Society, the floating of the timber in Norrland has, during the last two years, taken place under favorable conditions, and the stocks at the saw mills ready for export, are therefore very large. They are calculated to amount to about 400,000 standards. True, this is not more than what was stocked at the mills at the same time last year, but there is no doubt that the stocks were then a great deal too large.

This was proved by the forced sales and exports at the beginning of the season of 1883, which so injuriously affected prices. The total export from Sweden during 1883 amounted to about 750,000 standards sawn timber, a quantity largely in excess of former exports; in 1882 the export was 715,000 standards; and in 1881 about 611,000 standards. These large sales could only be effected at prices which leave no profit, and having ascertained that the stocks actually at the saw mills are just as large as before, a considerable number of saw mill owners now clearly see the necessity of a curtailed production.

The first step in this direction ought, of course, to be a reduction in the cutting, but the amount of cutting is principally arranged during the autumn, so that it is now too late to make any alteration in this, and any arrangement in this respect must be left over till next autumn. There is thus no other way in which to curtail the output and strengthen prices than by preventing too large quantities being prepared for the market and offered for sale. A number of saw mill owners, representing an export in 1883 of about 400,000 standards sawn timber, came lately together, and "on their word and honor," and under the control of some gentlemen specially appointed, the greater part promised to reduce their export this year by 25 per cent., and in some cases to reduce their sawing in the same proportion. In this way the quantity of sawn timber available for export from Sweden this year will be 100,000 standards less than in 1883. By this means the saw mill owners hope to be able to raise prices at least to a figure which will cover the value of the timber.

This effort to steady prices would, perhaps, in itself not suffice, if the assistance of owners to reduce cuttings this autumn and next year could not be relied on. But from what was said at the meeting at Sundswall by a great many saw mill proprietors, which later on signed the convention, it would appear that there is a general feeling of the necessity of short working, and that the majority will adopt it. Should this be adhered to with steadiness, there can be no doubt that the higher prices will fully compensate for the increased proportionate cost of production, and, however reluctant foreign buyers are to place orders, there is still reason to look forward with confidence to the result of this season's trade.

Although not all the saw mill owners in Norrland were willing to join the convention, the fact that those entering into the agreement represent two-thirds of the export from Norrland may be taken as a proof the prevailing opinion, and from what we can here we have good reason to expect that many of those who have not thought it right to sign the agreement are still determined to act in the same spirit.

The seat of the controlling committee is Stockholm, and the president is the Count Hallwyl, owner of the Ljusne Mill; the other members are: Mr. M. Arhusiander, Mr. R. Fisk, Mr. J. E. Francke, of Stockholm, and Mr. Wilhelm Kempe, of the firm of Joh. Wikner & Co., Hernosand.

A White Rainbow.

Among the remarkable celestial effects of last November may be reckoned the appearance of a white rainbow, or *cercle d'Ulloa* seen at Courtenay, (Loiret), France, on the morning of the 28th of that month. This phenomenon is very rare, and is described by M. Cornu, the well-known astronomer, in a note to the French Academy of Sciences. The sun, which rose in the midst of the level streaks of cloud was very pale; an intense hoar frost covered the fields; a fog of very fine water drops formed a thin vale through which the sky could be seen free of clouds at the zenith, but swathed in bands of cloud on the southeast. Opposite the sun a great white arc or rainbow without color was pictured on the fog, and recalled the smoke crowns of phosphoreted hydrogen. The apparent height from the summit of the arch to the horizon was 23 deg. 26 min., the apparent amplitude or span 80 deg. The apparent altitude of the sun at the time (9.41 A. M., Paris time) was 17 deg. 34 min.—*Engineering.*

It would more than repay a day's sojourn at Jonkoping, says the *Pall Mall Gazette*, to visit he factory whence proceeds not a small part of the light of the world. The latest novelty, only at work for about a month, is an enormous engine, which daily produces 1,000,000 boxes of Swedish matches. This wonderful machine receives the raw material, namely, blocks of wood at one end, and, after a while, gives up at the other the matches neatly arranged in their boxes, ready to be dispatched to the uttermost ends of the world. The wood which in the course of last summer was brought over to Jonkoping to be made into matches filled twenty steamers and eight sailing vessels.

THE QUESTION OF FOREST SUPPLIES.

The following paper is by Franklyn B. Hough, Ph. D., author of "The Elements of Forestry," etc. :—

A matter of serious importance with every one engaged in dealing in any material, or in working or using it, is that he should known as to how extensive is the supply, the probability of its maintenance, and the possibilities of its renewal. In the case of the minerals and the metals, although there are instances of local exhaustion, the amount produced has never yet failed to meet the growing demands of commerce and the arts; and although none of them are being replaced by any process of nature, when one taken, we seldom or never hear of any anxieties expressed, that a time will ever come when they will be entirely gone, and when the world must get along without them. Perhaps some exception to this statement might be made, in respect to the theories of some economists, who have estimated upon the durability of coal beds, and the like; and a little may be going on in the way of restoration, from the deposits of mineral waters, etc., but without any exception worth noticing. The statement is true, that we are using the supplies that were created before man had existence, and which after some thousand years still appear sufficient for human wants.

With the commodities in use from vegetable growth, although the natural supplies may in some cases appear to be abundant, and to some who reason only from what comes within the horizon of their own personal observation, they may seem to be *inexhaustible*, there is no word in our language that has been more abused than this; and where accepted as literally true, there is none that is more liable to lead to dangerous results.

Limiting our thoughts for the present to the question of timber supply, we will consider the facts as every one must admit them, and see as to what conclusions they lead us.

At the time when American colonization began, by the English in our present Atlantic states, and by the French in Canada, the importance of the woodlands in the public economy was already beginning to be felt in Europe, and traces of this may be found in the records of that period. Sir William Penn, in the very beginning, appears to have realized this, when he inserted the provision in a law, two hundred years ago, requiring that five acres in every hundred shonld be retained in woodland; although it was not, so far as we know, made a condition in any of his conveyances of land.

In various New England patents, trees fit for use in the Royal Navy were expressly reserved from cutting, and commissions were issued to agents authorized to look after these reservations, and supply from them the timber needed for public use. A war in Europe having cut off the supplies of tar and other naval stores from the Baltic ports, efforts were made to obtain these materials from our northern forests, before the wealth of southern pines in these resources had become known, and before the fact had been proved that none of our northern pines can, in their climate, he depended upon for yielding these commodities in any profitable degree.

While the commission appointed under Colbert for studying the forestry question in Canada was engaged in preparing the Ordinance of Waters and Forests, of 1669, the French governors in Canada were instructed to except the valuable timber of that country in their grants of land, evidently regarding it probable that it might be needed for home government.

These measures indicate that from our beginning the forests of America have been looked upon as necessary for supplying the wants of Europe, and not a year has since passed (excepting as our ports may have been closed by an embargo or a war) without there being large shipments of timber and lumber to meet a foreign demand which Europe could not supply.

Our consumption at home began, everywhere throughout the timbered regions, with the wanton waste of everything to make room for agriculture, and for many years with no product of value, excepting what came from the ashes. Later along the manufacture of lumber and the development of new industries have kept pace with our progress in population and wealth, every year increasing the demand, and steadily reducing the supply, until many of the states once heavily timbered throughout, when this spoliation began, have scarcely enough left to meet their local wants for many years to come.

The amount of sawed lumber now used in the country cannot be less than 25,000,000 feet a year. This would girt the earth at the equator with a flooring of two inch plank nearly 100 feet wide. If piled in a solid mass, without a particle of vacant space, it would cover a square mile nearly 75 feet high. If we add to this estimate the amount of wood used for fuel, and for hewn timbers, shingles, cooper stock, ship-building, railroad ties, charcoal, and the thousands of industries in which this material forms a part, and often the greater part, of their stock, we shall be able to form some idea of the amount, although figures are wanting to state even approximately the general aggregate.

To this we should add what is wasted by fires, an amount which in some years, as in 1825, 1871 and 1881, was many times greater than that actually used for the supply of all our wants, and which never falls less than several millions of dollars in the best of years. We cannot overlook this waste in our estimates of the future, any more than the manufacturer can his losses, in calculating the profits of his business in a given time.—*Journal of Progress.*

WESTERN LUMBER SUPPLY.

Many well informed persons are worrying about the supply of timber for the future of the now great prairie regions of the west. Many anxious fathers are wondering what their grand childern will do for fuel to keep them warm and lumber to build their houses. Appalling statistics of the number of cubic inches of timber [used annually in making matches, clothespins, shoe pegs, railroad ties and other equally monstrous things until, in imagination, they see the last stunted tree down, leaving a vast treeless desert on this continent. They can see no escape from the horrible dilemma which awaits their posterity in the near future, and so are ready to mourn their being in advance of their creation. They can easily figure out the entire consumption of the coal and oil supply, following quickly the disappearance of wood, and this in turn brings a long train of painful things closing with the finale of the human family. It is useless to remind them that densely populated China and Japan and even in some of the older countries of Europe, man has been hewing away for thousands of years in a vain endeavor to exhaust the supply of woods, or cite the fact that our prairies will soon be largely timber from natural causes. Nothing less than exhibition of sufficient timber to last until millennium will drive away the nightmare which afflicts them. There are yet many thousands who are so fully impressed with the near approach of a timber famine that they are exceedingiy anxious to buy all the timber land possible within their means and credit on speculation. The pine land mania the last few years originated with, and is still kept alive by, this crowd who, after investing their last dollar in pine land, were astonished to learn that there were any more acres left unoccupied anywhere, and are still more so at the fact that years bring little or no increase in the market value of timber. Hundreds of residents of the east, seeing what they regard as the final destruction of the timber from Maine to Florida in from 25 to 40 years, rushed out to Michigan, Wisconsin and Minnesota and bought up the timber and have been paying taxes and agents year after year until it is doubtful if they could realize the amount invested if neither fire, storm or trespass have interfered with it. All these are astonished that there is any other timber besides their own, which has been so carefully husbanded, left standing on the continent. Nothing could convince them that the supply of timber in Maine, Canada, New York or Pennsylvania is ample to log for another winter. Notwithstanding these regions have been throwing out hundreds of millions of feet every year for a hundred years, and similar sections of Europe have been doing the same thing for a thousand years, there are probably over 250,000 square miles or 128,000,000 acres of timber lands east of the Rocky Mountains in the United States, to say nothing of the incalculable amounts in the British possessions and on the Pacific slope.—*Muskegon News and Reporter.*

NATIONAL PUMP WORKS.

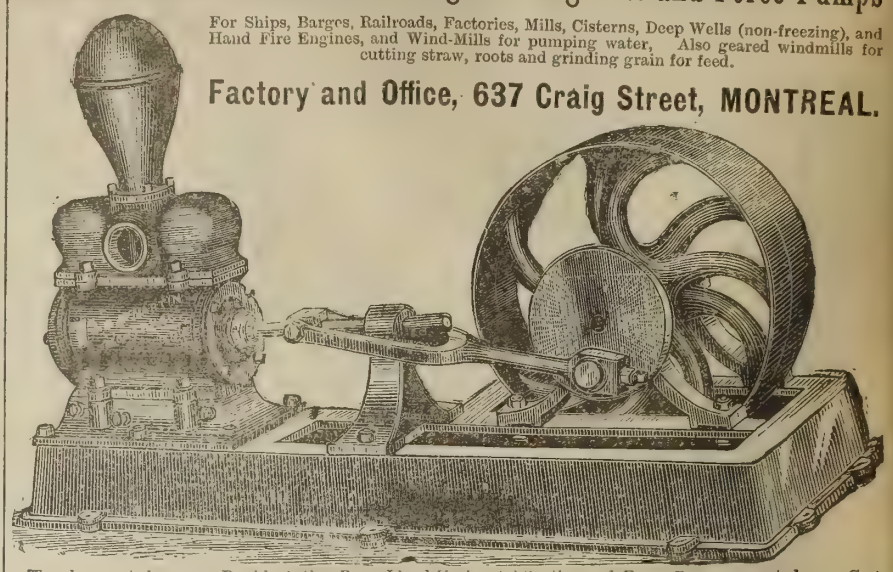
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MONTREAL.

Reciprocity in Lumber.

The New York *Sun* says:—If there is any one article which should be placed on the free list, it is lumber. Everybody agrees in this with the exception of certain manufacturers of lumber in the extreme northern states. Mr. Morrison, nevertheless, proposes to retain the duty upon lumber.

The duty upon lumber is aimed at Canadian spruce and pine. No other lumber is imported from Canada, and spruce and pine cannot be imported from any other country. Such woods as are not produced within the limits of the United States are already admitted into the country free of duty. The object of this duty, then, is perfectly obvious. It is to increase, as far as possible, the profits of manufacturing lumber in Maine, Michigan, and other states in the northern part of the country where pine and spruce forests occur similar in character to those growing beyond the Canadian boundary.

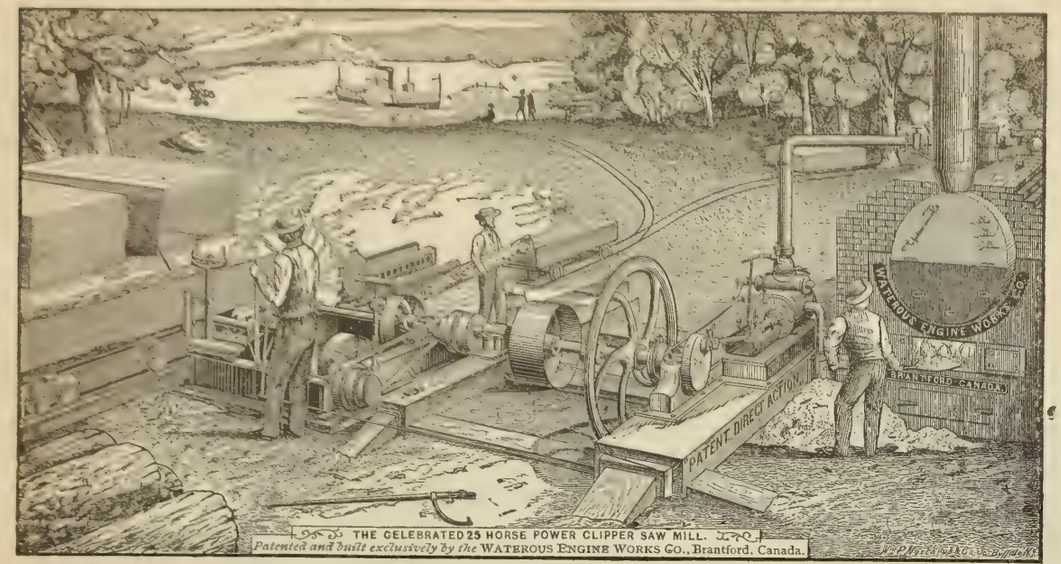
Mr. Dorsheimer of New York has introduced a bill into the house of representatives placing lumber upon the free list; it should be promptly and favorably acted upon. It is a duty Congress owes to the country.

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GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Augusta, Maine.

Semi-Portable and Portable Direct Action and Belted Saw Mills!

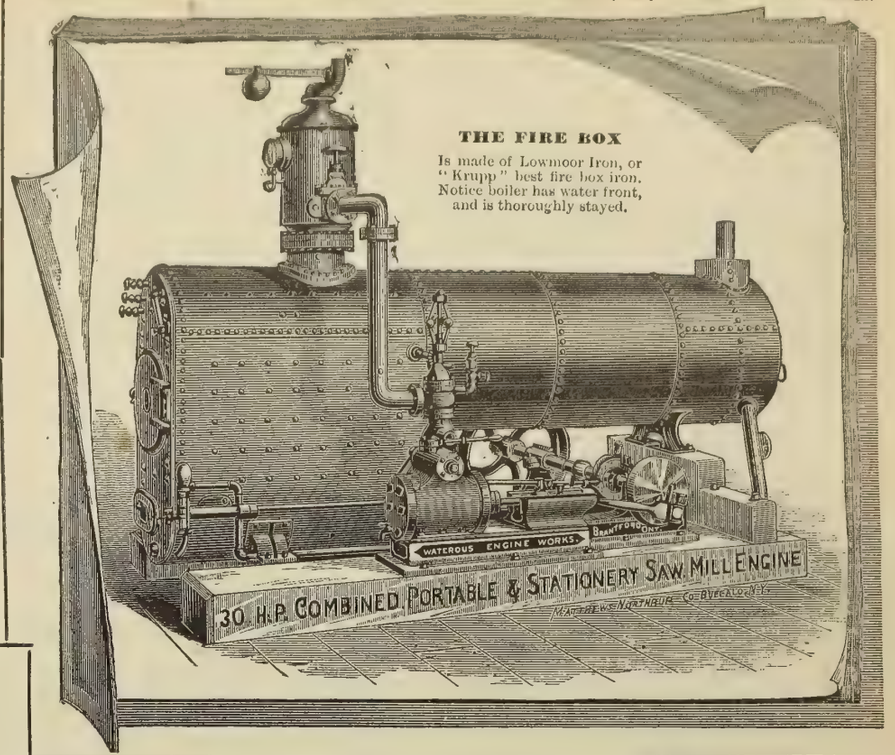
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Above cut rep esents **Our 25 H. P. Patent Direct Action Mill** which we guarantee to cut 8,000 to 12,000 feet of lumber per day of ten hours, and to be the most efficient, economical and durable mill built in America, and will saw lumber cheaper per thousand than heavy large size belted or gang mills. For over a quarter of a century the leading pioneer mill of Canadian settlers. ☞Specially constructed for hard work.

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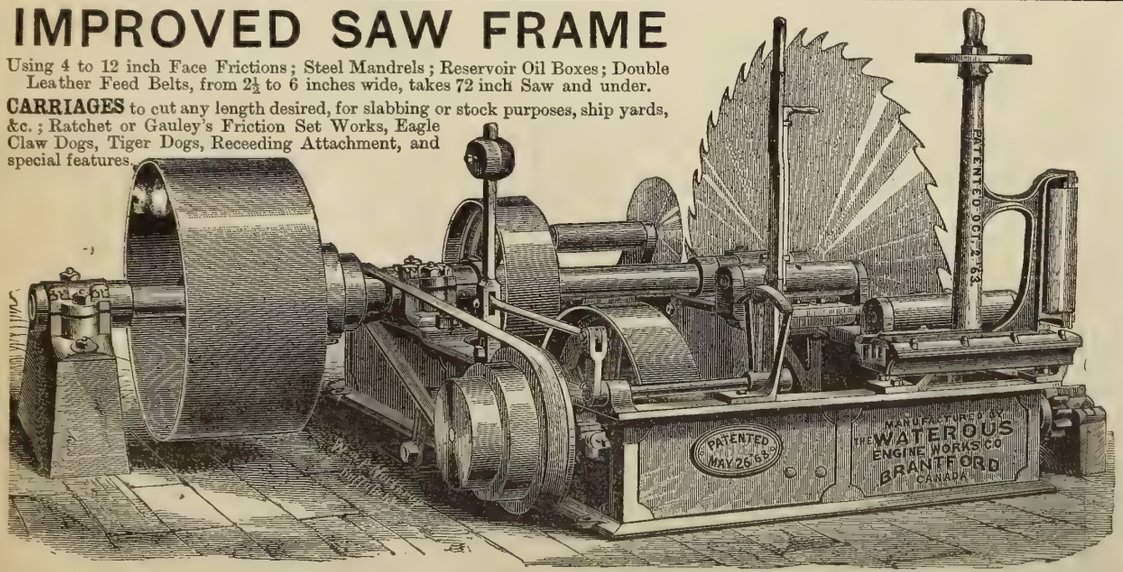


A. & P. White, Pembroke, have one of these 30 H. P. mills at Deux Rivieres, C. P. R. R.
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Using 4 to 12 inch Face Frictions; Steel Mandrels; Reservoir Oil Boxes; Double Leather Feed Belts, from 2½ to 6 inches wide, takes 72 inch Saw and under.

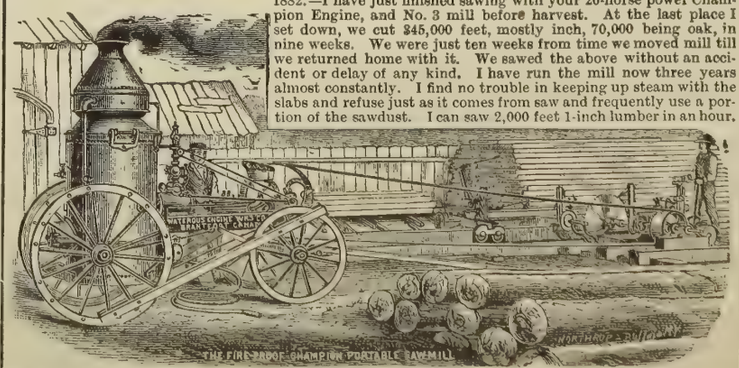
CARRIAGES to cut any length desired, for slabbing or stock purposes, ship yards, &c.; Ratchet or Gauley's Friction Set Works, Eagle Claw Dogs, Tiger Dogs, Receeding Attachment, and special features.



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GEORGE BOOK writes as follows:—"ST. ANNS, ONT., July 27th, 1882.—I have just finished sawing with your 20-horse power Champion Engine, and No. 3 mill before harvest. At the last place I set down, we cut 345,000 feet, mostly inch, 70,000 being oak, in nine weeks. We were just ten weeks from time we moved mill till we returned home with it. We sawed the above without an accident or delay of any kind. I have run the mill now three years almost constantly. I find no trouble in keeping up steam with the slabs and refuse just as it comes from saw and frequently use a portion of the sawdust. I can saw 2,000 feet 1-inch lumber in an hour.



The following are a few who have bought these mills:—

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G. B. Hall & Co., Que. (2)
Dominion Land & C. Co. Sherbrooke, Que. (2)
Sorel R. R. Co., Que. (2)
Cochrane Ranche Co. Bow River, N.W.T.
Nor.-West Milling and Mining Co., Bow River, N.W.T.
Toronto and Nor.-West Colonization Co., Near Brandon.
Morton Dairy & Farming Co., Turtle Mountain.
Allan Grant, Ottawa.
Geo. Perley, Ottawa.
Michipicoten Native Copper Co.,
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Double Edgers, 2, 3 and 4 saws; Automatic Lumber Trimmers, 5 to 9 saws each; Log Turners, Slash Tables, Log Jacks or Haul-up of all Capacities, Endless and Single Chain; Automatic Log Rollers, Transfers, Live Rolls, Shingle Machines, Drag Saws, Knee Bolters or Block Splitters, Shingle Packers, Gang Lath Mills, Stave Machines, Automatic Sawdust Feeders for Gangs of Boilers, Sawdust, Slab and Refuse Conveyors, Elevators, Pickering Governors, Worthington and Blake Steam Pumps, American Planing and Matching Machines, American Saws, Solid and Inserted Tooth, Extra Thin Circular Board Saws a specialty, Swages, Gummers, Emery Wheels, and all kinds of Saw Mill Furnishings kept in stock.

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Send for New Price List and Illustrated Circular, of special interest to saw-mill men. ☞Mention this Paper.

BRITISH TRADE RETURNS.

The *Timber Trades Journal* of Feb. 16, says: The timber returns for the month of January are always unimportant, nor are they considered any index to the forthcoming season, as they chiefly consist of the stray cargoes of belated fall ships, or of oddments by regular liners from the open winter ports. There is a small excess over January, 1883, but only in hewn timber. Sawn and planed are something short. America is backward in the supplies, but Russia very forward, and Sweden and Norway, as usual, stand in the lion's share. On the whole there is a difference of 12,646 loads more this January than the one before, but the valuation only increases by £1,828. This would indicate a considerable reduction in price, as the 12,646 loads surplus would hardly be considered of such small value as £1,828. As pitwood or firewood it would be worth more than a pound a load. The depreciation must, therefore, be spread over the whole 137,941 loads imported during the month.

Taking these obvious deterrents into consideration, it dees not appear that there will be any eagerness to replenish the stores in this country by early supplies on a large scale. The charters entered into already are understood to be chiefly by owners of stocks abroad, who desire to get their produce over to this side as early as possible; and transactions of that sort, though they sound like a trade revival, are a warning to the local importer to make haste slowly. Goods intended for auction sale do not inspire confidence in the market, but they impair it, when seen to be intended on a large scale and systematically. It is true the reports from abroad speak of curtailed supplies at most of the shipping ports from real or artificial causes, and if such be actually the case, it would suit well with the diminished requirements of this country consequent on the considerable stocks, in comparison of the demand, which are still held over since last year in the principal emporiums of the United Kingdom. Bur then such reports are always in circulation at this season of the year. And in those years when the most limited supplies have been confidently predicted the season has closed with most inordinate stocks on this side, and a giving way of prices all around. Such was especially the case in 1880, when the Gulf of Bothina ports were repeatedly asserted to be some 800,000 standards deficient, and figures were deliberately paraded to show that it could not be otherwise.

It so happened, however, that this country was more than usually well supplied from all quarters that year, and prices were maintained with some difficulty and small profit, though it was a year of good trade generally, after the depression of 1879, to which the aspects of the present time may be likened.

If there is one thing that the trade may feel safe in relying upon we should say it is that their supplies for the coming season are not likely to fall short from any quarter, even should trade brighten up to a more active demand than is at present anticipated. Much, of course, depends on the turn that trade may take as the season advances. A week ago some uneasiness was felt in the money market, and the rise of the bank rate, which was not much expected, was taken as a note of warning. Since then, however, money has again become easy, and anxiety on that score seems to have quite subsided, which is a very favorable diagnosis for our spring trade. Not every one is aware how much trade depends on the directors of the Bank of England, as that establishment influences the action of the other great financial houses, all of which limit their transactions in proportion as the bank rate advances. A check to the circulation of money always operates to the disadvantage of trade, because as money gets scarcer commodities become cheaper, and not unfrequently sacrifices have to be made to meet engagements falling due, when money must be raised in time or credit lost, as discounting and borrowing on securities are rendered more difficult. Therefore trade is to be congratulated on its escape from a crisis, for if almost all merchandise is at a low ebb, and scarcely remunerating those who traffic in it with experience, skill, and careful management, any prolonged check to the circulating medium, at such a period could hardly fail to be very disastrous.

We are promised a smaller supply this year from the New Brunswick ports, on the strength of which better prices are expected. Last year was very unsatisfactory to most of the shippers there, on account of the low price to which spruce fell in the United Kingdom as the season advanced. "Lumber," says our St. John correspondent, "is the great staple of our province, and the backbone of its prosperity, and with a depressed market for wood goods we cannot look for buoyancy in any other line of business."

Though we are not quite so dependent on it here, it may with truth be said that there is no commodity imported which gives so much employment to our shipping, or which keeps so many people at work in all parts of the realm, as timber, and any decay of the trade, if not a national calamity, would indicate the approach of one.

With a revival of commercial activity, an abundant supply from abroad would not be unwelcome, but in the absence of any fresh impulse, of which there is no immediate indication, it is not very likely that a great rush for goods at the timber shipping ports will occur when the announcement of open water allows the new season's traffic to begin.

That there will be a fair average demand by and by we see no reason to doubt. But any attempt to force our market now, by impatience on the part of our foreign friends, the shippers, would be likely to do serious mischief here, which must eventually recoil upon themselves.

VALUABLE INFORMATION REGARDING VERY HARDY WOODS.

The readers of the *Canadian Horticulturist* are aware that Mr, Chas. Gibb, of Abbottsford, Province of Quebec, spent last summer in visiting the horticultural establishments of Europe, and that in a special manner he investigated the fruits and trees of Russia in the hope that he might be able to find some very hardy varieties of good quality which could be introduced into Canada, that would be valuable acquisitions, particularly in Quebec, the Algoma district of Ontario and in Manitoba. From his published notes and letters we here bring together some of the most valuable items of information, which strike us as being specially worthy of attention.

THE SCOTCH PINE, Pinus sylvestris. At the ancestral house of the Vilmorins, those well known seedsmen and nurserymen of France, he found a variety of this pine of great value, differing in its habit of growth from those that have been imported into this country hitherto, and well worthy of attention. Its habit of growth is upright and straight; the first plantation was large enough for masts of sloops and small schooners. There were plantations from the seed of those planted down to the third generation, and even the third generation of them were from 20 to 30 feet high and as straight as candles. This form of Pinus Sylvestris does not seed as abundantly nor does the seed germinate as certainly as that of the other forms which are comparatively of little or no value, hence the seed of commerce is that of the poorer sorts. This form of the Scotch pine should be imported and grown in this country that its valuable timber may become a source of national wealth.

THE WHITE POPLAR, Populus Alba, var erecta. This variety is nearly as erect in its habit of growth as the Lombardy poplar and is thought by Mr. Gibb to be very important both as a timber and an ornamental tree. Professor Budd, of the Iowa Agricultural College, who accompanied Mr. Gibb, says that the best forms of this white poplar would yet become our leading lumber tree for hundreds of economic uses. Already a very considerable demand has sprung up for such wood for purposes of paper making. Cuttings of this poplar have been ordered from Russia for trial at the Ontario Agricultural College.

THE WEEPING BIRCH, Betula alba verrucosa, seems to be a variety of drooping birch, with foliage like our common white birch, which Mr. Gibb thought to be specially desirable. He saw it growing upon the dry soil of the Petrovskoe Park, near Moscow, in which the avenues and groves of this birch formed the most attractive feature, presenting a charming vista of bright, translucent, white barked trunks.

THE APPLE. To his surprise, Mr. Gibb did not find what we call the Siberian Crab in Russia, save in some botanical collections. The apples that prove hardy in their colder sections are quite different races from those grown here or in Western Europe, and he has come to the conclusion that the kind of hardiness we require in an apple tree, that it may thrive in our extremes of hot summers and cold winters, is not to be found in occasional individuals of the races we have, but by introducing the races of North-eastern Russia which there grow in climate very similar to our ewn, There seems to be two of these races there, one of them known under the generic name of Anis, of which there are many varieties. This Anis apple he says is the leading apple of the Volga; that in latitude 55° North, in a climate of great extremes, 600 miles further north than Quebec, there are twelve villages where the peasants are growers of this race of apples in large quantities. Another race seems to be designated by the name of Antonoka. It is the leading apple of the vast prairie region that stretches from Tula to the south of Kharkof and from Kozlof to Kiev. He found this apple in latitude 54° north, about 480 miles further north than Quebec, regarded as their hardiest and most productive apple tree, noted for its length of life, average annual bearing and fruitfulness in old age. The Aport is the name of another family, to which the apple grown here under the name of Alexander belongs. Arabka or Arabskoe is the name of yet another family, seemingly not quite as hardy as the two first mentioned, yet containing some members that are likely to prove valuable here.

THE PEAR. The wild pear he found planted in the public square at Simbrisk on the Volga, as an ornamental tree, where the soil is dry, the summer sun hot, the air excessively dry, and the winters very cold, because it maintained a dark green, glossy, healthy foliage better than any other. The pears were of two forms, one like a Bergamot in shape, small, and very variable in quality; the other pyriform, small and usually too astringent even for cooking. The most hardy variety which he found yielding fruit that is eatable, is the Tonkovietka; next to it in endurance is the Bessemianka, which is considred the best that ir grown in the severer parts of Russia.

THE CHERRY. This also appears to consist chiefly of two families, the Vladimir and the Ostheim. Of these the most important is the Vladimir, which is probably so named from the district where it is most extensively grown, there being over 100 orchards, each containing 15,000 trees. The Ostheim is supposed to be a native of the Sierra Nevada mountains of Spain, much resembling the Vladimir in foliage and habit of growth.

THE PLUM. This fruit was found by Mr. Gibb in Yladimir and Kazan, some red, some yellow, but most were blue, much resembling the prunes of Germany. He thinks some of these Russian plums may prove to be valuable for us. It is doubtful whether they are any more hardy than the Chickasaw plums of North-west America, but they may be of better quality. Mr. Gibb mentions a dwarf variety of the Prunus Spinosa which is very ornamental when laden with its small blue fruit, and advises its introduction as an attractive plant for our lawns.

THE APRICOT. There is a variety of this fruit growing in eastern Turkestan in great quantity, which though small in size is sweet and of fair quality. Also in the Province of Mantchuria there is yet another variety really good, which is brought in considerable quantity to the Pekin market. Mr. Gibb thinks we should give these a trial.

THE ROSE. Mr. Gibb learned that the Japaneses Rosa Rugosa was perfectly hardy at St. Petersburg and Moscow, hence we may be sure that it will thrive in our climate. Both the single and double forms are beautiful.

FLORIDA FORESTS.

Col. Ben. Wait, of Grand Rapids, has been to Florida to prospect for pine, and has returned after a somewhat extended examination of the forests of that state. He is a thoroughly practical man, and would probably see more in a day among the pines, than would most men in a week's wanderings therein, because of the application of his strong common sense combined with practical business ideas in forming his conclusions. He was in this city last week, and in conversation with some of our newspaper and business men dropped some ideas which will doubtless prove of interest to many readers of the *Gazette*. The Col. is now one of the largest operators in pine lands in the Northwest, and has not made his late trip to Florida one of pleasure alone, but took occasion to make large purchases for himself and others. He regards the state as one of nature's own favorities, and having within its borders the germs of great wealth, an attraction peculiarly seductive to northern enterprise and northern capital; and particularly enticing to that class of Michigan lumbermen who, noting the rapid disappearance of our pine forests, are seeking new fields for the investment of capital. The Col. says that his experience with the people native to the state, was of a very pleasent nature, and he thoroughly appreciates the hospitality tendered on every hand during his stay in the "land of flowers," while he observes that the people are offering every inducement to good lumbermen to come and satisfy themselves of the reality that there are valuable forests awaiting the capital and energy of northern men.

But a better idea of what the Col. really thinks of this state can best be given ou readers by the following extract from a letter written by him to the editor of the *Gulf Stream*, a paper published at Pensacola, Fla. The Col. says:—"I congratulate you on the beneficent course yourself and people are pursuing in inducing our best lumbermen to come and look for themselves through your valuable forests, and must say I have been most specially gratified during the few days I have been under your escort, riding through and bivouacking amid your noble pines. A pine tree is next to my wife in my love and esteem. I could become a hermit if I but had the pine as my shelter, my bulwark, my fortress, my protection, and your salubrious winds for my surroundings, singing their symphonious refrains through their long leaflets; and the succulent, sweet yam, delicious fish, oysters and fruits so freely diffused throughout your state, for my "reconstruction." The few days we were roaming I was more than pleased with the noble scenery, the dense forests, the numerous lakelets; rapid watercourses, the beautifully clear limpid spring water, so lavishly distributed all around us. The 500,000 acres of timber you showed us belonging to the Pensacola and Atlantic railroad company, if taken as a sample of the whole two million tract can, by common sense and odinary good judgment, be developed into immense wealth.

I came to Florida to see pine, and I am emphatic in saying I have seen it: and could I spare more time for that purpose, I could enjoy no greater satisfaction than spending months more in the occupation with the same band of jolly explorers.—*Lumberman's Gazette.*

Maine Lumber Industry.

WASHINGTON, March 4.—Representative Reid was before the Ways and Means Committee to-day opposing placing lumber on the free list. He said if the manufacture of lumber was stricken down in Maine the entire timber land district, one-half the area of the state, would lose so large a portion of its value that the whole state would feel shocked severely. He said that all the talk about floods being caused by the destruction of forests, even i true elsewhere, had no application to Maine. There not even the growth of each year was cut, and the business was as regular as raising any other crop.

Special Agricultural Committee.

A select committee of the Dominion House of Commons has been formed for the purpose of collecting information on agricultural matters in the Dominion. The following circular has been issued:—

SIR,—A special committee has been appointed by Parliament to consider what steps should be taken to place the Department of Agriculture

in a position to better promote and encourage the agricultural industries of the country. The committee being anxious to become possessed of the advice and experience of men engaged in the culture of the soil, as well as those devoted to the study of sciences having a practical bearing on agriculture, begs to solicit your co-operation, and to request that you will express your views on those of the following questions with which your feel prepared to deal. Enclosed is a printed envelope for reply, which the committee would be pleased to receive at as early a date as possible.

Yours, &c.,
G. A. GIGAULT,
Chairman of Committee.

Among the questions propounded are the following:—

Would the importation of fruit tree scions and plants from Russia and other countries under climatic conditions similar to those of Canada, be of service to our fruit growers?

Would the establishment of an experimental farm or garden where varieties of foreign grain, fruits, trees, and fertilizers might be tested, and whence such seeds, plants, &c., might be distributed throughout the Dominion, be advisable?

Is there in your neighborhood sufficient standing timber to supply shade, fuel, and other domestic wants?

Have any steps been taken to maintain this supply, or to replant where it has failed?

Do your know of any attempts to introduce tree planting for timber purposes, what varieties and area were planted, what were the conditions of the soil, what have been the results, and to what do you ascribe the success or failure of those attempts?

LOOSE PULLEYS OR IDLERS.

The common practice of running a loose pulley on the shaft, as a waggon wheel runs on its axle, is one full of annoyances and is anything but a permanency in use. A loose pulley, or an idler pulley, should have its separate shaft with its separate journals. The shaft upon which the fast pulley is fixed is of too small a diameter to act as the axle for a pulley which revolves rapidly, and the hub of the pulley is too short to stand the leverage strain of the broad rim, particularly when this strain is intensified by that of a long, heavy belt. The better practice, wherever it is feasible, is to mount the idler pulley on a short independent shaft with its own independent journals. One of these journals may turn in a projecting portion of the hub of the fast pulley, so that the rims of the two pulleys may come together, or the idler may be supported by two boxes outside the loose pulley.

With this arrangement there is no pulley turning on a shaft and "wabbling" from side to side by the unequal and changing pulley of the belt, making a wear that will ensure a rattling.

Another device is practiced by a first-class echanic, which is to substitute the turned hub f the fixed pulley as an axle for the loose pulley. The result of this method is to give a large bearing for the loose pulley hub. To accomplish this result the fast pulley is cast with the rim entirely on one side of the arms and the hub extending beyond the other side of the arms sufficient to receive the hub of the loose pulley its entire length, while the rim and hub of the loose pulley project from the same side of the arms of the loose pulley. This arrangement gives a very large bearing for the loose pulley hub—the out-ide of the fini-hed fast pulley hub—and also saves the width of one pulley in the projecting end of the shaft, as it need come no further through the box than to receive the hub of the tight pulley.

In all cases it is a good plan to have the loose pulley slightly smaller in diameter than the fast pulley, to relieve the tension of the belt; and when the fast pulley is slightly larger, it will receive the belt and start the work more readily.—*Scientific American.*

Growing Basket Willow.

There are many little by productions, or what are generally so considered in relation to larger interests, that often bring to those engaged therein very substantial proceeds. A correspondent of the *Prairie Farmer* classes the growing of basket willow as at present furnishing an example of this kind. The prices have been such as to afford good profit and the cultivation is very simple.

The cuttings, about nine inches long, are stuck down in the soft earth in slanting position leaving about two inches above ground. There is no danger of their failing to grow. After this, the cultivation is no more than for corn. They will grow on any land. They are grown on land so wet that it could not be plowed or cultivated, but dry ground is better. At present there is not enough grown in this country for consumption, and $500,000 worth is imported each year. Peeled willow is now about $100 per ton.—*Scientific American.*

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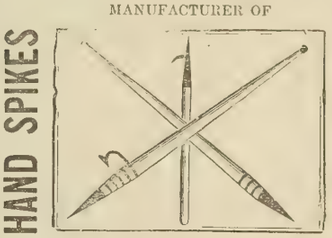


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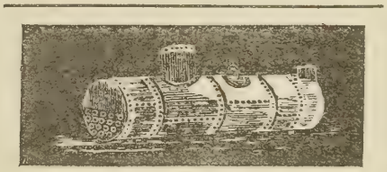
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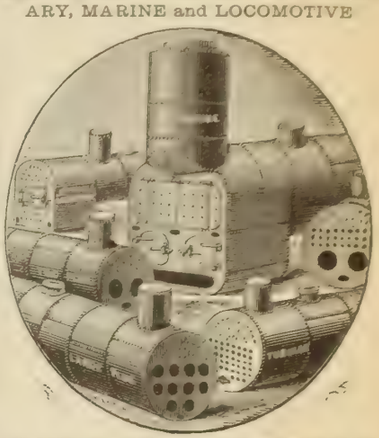
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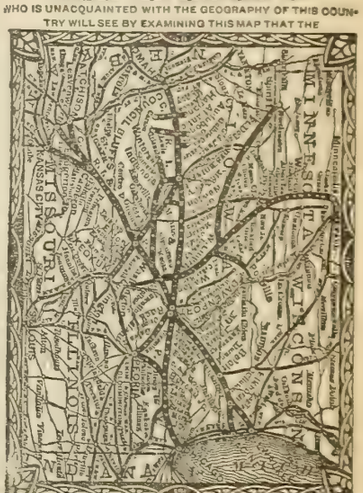
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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., MAR. 15, 1884.

IT is said that between Oso and Verona larger quantities of ties end timber are being taken out than in any previous year. Rathbun & Co. expect to buy 35,000 ties this spring.

THE cut of lumber on the St. Croix this season is not expected to exceed 40,000,000 feet where the average cut for several past seasons has been near 60,000,000. Lumbermen's wages accross the border are very low.

A GRAVENHURST correspondent says that Mr. T. Tait has been making extensive improvements in his shingle mill. A new cylinder has been put in the engine giving it much more power, a second shingle machine has been set up and the mill generally thoroughly repaired. Mr. Tait has contracted to supply seven millions of shingles during the present year.

ARTIFICIAL cork is among the recent German inventions. The method of production consists in mixing powdered cork with starch and water, and kneading the mass while boiling hot until it is thoroughly mixed. This substance is then poured into moulds for forming the articles, and afterwards dried at a very high temperature. The material is described as quite light, and possessing non-conducting properties.

THE International Tub and Awning Co., of Ottawa, whose advertisement appears in this issue, have lately begun to make an ingenious and useful article in the shape of a canvass canoe, which can, without trouble, be folded into small compass. They are cheap and serviceable and likely to be much used during the coming season by sportsmen, tourists, lumbermen and others. This company last year carried off five medals and twenty-six first prizes at the exhibitions held at Toronto, Halifax, and St. John, N. B. These were awarded for the excellence and completness of their camping outfits, tents, flags, ends, tables and general supplies for camps. They have just issued an attractive illustrated catalogue which is well worth sending for and may be had free.

PARTIES in Pictou, N. S., with a capital of $18,000, have received at Ottawa letters patent to manufacture, operate, and sell, a rope-serving machine. The Alma lumber and shipbuilding company of New Brunswick have deposited the plans of their proposed works.

A QUEBEC correspondent says that it is rumoured that an English company is on the eve of purchasing the whole of Mr. Lamontagne's timber limits at Escoumains. These limits comprise the intermediate region between the Bergeronnes and Sault au Mouton Rivers. They are said to be worth about $150,000.

POSSIBILITIES OF LAND CULTURE.

A remarkable illustration of what may be done with ten acres of land only has been furnished by a fruit planter named Dillon, of Woodland, Cal. Six years ago he planted five acres with Muscatel grapes, since which he has added two more acres. He has also planted one acre with prunes, nectarines and peaches. From the five acres first mentioned his gross returns last year were $1,200. Last year he planted three-fourths of an acre in beets, which yielded 35 tons. By the aid of these and a little bran or sorts he kept a span of horses and two cows seven months, besides which he sold $30 worth of beets. One of the cows yields from ten pounds to eleven pounds of butter per week, besides the milk which the planter's small family uses. By the side of his fencing Dillon further planted twenty walnut trees, which have borne fruit for two years. From the wood cut from these trees this year in the trimmings he made a little over three cords of stove wood. Gum trees planted six years ago, and some of them twelve inches in diameter, will make when cut in wood from one-fourth and one-half a cord of wood per tree. In the condition in which he now has his fruits and vines, this enterprising grower on a small scale states that he can make a living for himself and family and lay by from $800 to $1,000 annually. His family consists of his wife and one child. It is evident that Mr. Dillon of Woodlond, Cal., does not allow anything within his reach to lie idle or unutilized

AUTOMATIC DAM.

It has long been a question as to how a dam for rivers, so as to secure slack water for navigation, can be constructed. A dam was built across the Ohio river, below Pittsburg, with that object, called the Davis Island dam. Other dams similar to that one have been constructed by the government. The Davis Island dam was of French invention.

Since the dam referred to has been constructed, Mr. John Du Bois, of Du Bois, Pa., has been building dams on an entirely different plan. Comparing his invention with the Davis Island construction Mr. Du Bois says:

"While this is put up and let down by mechanical power, mine is put up and let down by the water itself. All the labor that is required to put it up or down is the closing of one set of wicket-gates and the opening of another, which will not take a man over five minutes. A dam 120 feet in length was put down and up seven and one half feet under nine feet of water in presence of Col. Merrill, Col. Craighill and Capt. Pratt, and many others at different times in less than ten minutes. The dam is perfectly automatic. It will commence going down when the water gets up to the hight set for it, and continues to do so as long as the water continues to rise until it is clear down. It will continue rising as soon as the water falls below the height set for it, and continues to fall until it is up. When properly built it will remain firm on a mud, sand or gravel foundation, provided care is taken to prevent it from undermining by the reaction of the water below the dam. The automatic arrangement and operation of the dam prevents a heavy body of water passing over it at any great elevation, and consequently there is but little danger of reaction below the dam. Another advantage is gained by this device. When the streams are too low to navigate on natural water, only the difference between natural and navigable water has to be locked. Locks of large dimensions can be operated very rapidly, as only the water under the lock gate or the dam constituting the gate is required to be drawn out through the wicket gates, allowing the water in the lock to pass over the dam as it is going down. Water let in a lock in this manner causes less commotion than letting it through wicket gates under a high head. A lock may have any number of dams across it, so that a single craft can be passed without loss of water, or a whole tow can be passed, saving much time and loss of water.

All the dams can be let down and form a chute. The rapidity with which a dam can be put up or down depends on the size of the wicket gates used. Whenever the natural water is sufficiently high for navigation the dam will be down, leaving the river entirely unobstructed for the passage of craft, and migrating fish thas ascend the rivers during the spring flood to deposit their eggs for the next annual crop of fish. Shad are the most numerous and profitable, but the dams on the Sasquehanna have entirely prevented their ascent. Much thought and money has been expended to provide a way to pass them over, but it is a failure as yet. When a number of dams are erected for slackwatering a stream they can be put down so they will create an artificial flood for descending navigation. They can be used in that way to break up and carry away the ice when forming."

Mr. Du Bois wants the government to furnish him means to build such a dam in the Alleghany river, the government to furnish him the money as the work progresses. The French government has offered to send an engineer to inspect a dam of the kind whenever Mr. Du Bois shall put one in that shall work satisfactorily in a large river, If it answers the purpose, the French government will pay for it liberally.—*Northwestern Lumberman.*

AUSTRALIA.

We take the following from the Monthly circular of Messrs. Lord & Huges, timber brokers, of Melbourne, dated 16th of January, 1884:—

Our last advice was on 19th ultimo, since which the season's holidays prevented all business at auction, until 8th inst., when the usual sales commenced, since which large offerings of the principal descriptions of timber have been made, with considerable sales.

Oregon is lower, sales being made at £6 7s. 6d. to £6 15s., at which prices three cargoes were disposed of at the one sale. Baltic deals maintained their price, but flooring is lower. American shelving, ceiling and clear pine, ex Empire, were all cleared off, fully sustaining last prices. Kauri pine is in excessive supply, and lower rates have had to be accepted. The cargo of Canadian spruce, ex Augusta, was offered on the 11th inst., but nearly all was passed in, the bidding not being up to importers' views.

Deliveries from the yards continue heavy, and the trade all seem to be doing a good business.

The arrivals have been—Drumlanrig and Kamjfiord, from Drammen, Helene, Elecktra. and Einar Thambarskelver, from Frederickstad, Juno and Erato, frem Christiana, with flooring; Sidney, from Gefle, Andrea Wilhelmina, from Skelleftea, and Java, from Soderham, with deals; Mesper from Port Gamble, with Oregon, laths, and pickets; Geraldine, from Saguenay, with spruce deals flooring and pickets; Empire, from Boston with clear pine, white pine shelving, T. & G. ceiling, spruce deals, laths, plaster and slates; Sobraon, Drumburton, Firth of Clyde, Aldborough, Crown of Scotland, Bothwell Castle, Port Jackson, and Westmeath, from Great Britain, Melbourne, from Marseilles, and Adreas, from Hamburg, with flooring, slates, lead, galvanised iron and cement; Palace, Peerless, and Jules Marie, from Kaipara, with Kauri pine; Lady Franklin, from Ballina, Konoowarra and Nemesis, from Sydney, with cedar.

RED DEALS.—Imports: 868 standards, 2,896 pieces from the Baltic. The arrivals have been Sidney, from Gefle; Andrea Wilhelmina, from Skelleftea; Java from Soderham; and Einar Thambarskelver, from Frederickstadt. The only sale by auction since our last report took place on the 11th inst., when the balance of cargo, ex Leto, was offered, but only a portion sold—MARMA brand, 9x3, realising 5¾d. to 5⅝d., and MB 5d. to 5 1-16d.

SPRUCE DEALS.—Imports: 23,551 pieces. The arrivals have been—Geraldine, from Saguenay; and Empire, from Boston. On the 11th inst., the cargo ex Augusta, was offered at auction, but only about 1,200 pieces were sold, 11x3 realising 3½d. per foot of 9x3. The small parcel, ex Empire, was also sold on same date.

OREGON TIMBER.—Imports: 750,428 feet super. The only arrival since our last has been Hesper, from Port Gamble. On the 8th inst., the cargoes ex Thos. R. Foster, Melrose, and L. B. Gilchrist,—amounting in all to upwards of 2,500,000 feet—were offered at auction, resulting in the clearance of the whole at prices ranging from £6 15s. to £6 7s. 6d.—average, about £6 10s.

LUMBER.—Imports: Clear pine, 120,287 feet super; white pine shelving, 281.629 feet super. These lines arrived in the Empire from Boston, and were sold by auction on 11th inst., Michigan clear pine, 1½ in. to 3 in., realizing £17 2s. 6d. to £17; 1¼ in., £17 2s. 6d. to £15; white pine shelving (Peabody brand,) £13 7s. 6d. to £13 5s.; other brands, £13 5s. to £12 2s. 6d.; T. and G. Ceiling, £10 12s. 6d. to £10 10s.

PITCH PINE.—Imports: Nil. Auction sales.—Nil.

REDWOOD.—Imports: Nil. Auction sales.—Nil.

FLOORING AND WEATHERBOARDS.—Imports: 10,013,040 feet lineal, from United Kingdom and Norway; 360,075 feet lineal from Canada. The arrivals have been Drumlanrig, Helene, Elecktra, Drumburton, Firth of Clyde, and Aldborough, from Great Britain. Sales by auction have been confined to portions of cargoes ex Eduard and Bertha, from the Baltic, and portions ex Augusta, from Canada, and Firth of Clyde, from London; the following being prices realised:—Red, 6x1⅛ 10s. 6d. to 10s. 3d.; 6x⅞, 9s. 3d. to 8s. 9d.; 6x⅝, 6s. to 5s. 9d.; 6x½, 4s. 9d.; 4 out weatherboards, 6s. 6d. White, 6x1¼, 9s. to 8s. 6d.: 6x⅞, 7s. 9d. to 7s. 6d.; 6x⅝, 5s. 9d. to 5s. 6d.; 6x½, 4s. 6d.; 4-out weatherooards, 6s. 9d. to 6s. 6d.

KAURI PINE.—Imports: 685,728 feet super. The arrivals have been Palace, Peerless, and Jules Marie, from Kaipara. The cargo, ex Jules Marie, and portions ex Palace were sold by auction on the 8th inst., hewn logs realising 12s. 9d. to 10s. 3d.; flitches, 14s. to 12s. 9d. All the flooring, ex Palace was sold, 6x1¼ realising 10s. to 9s. 9d.; 6x1, 8s. 3d.; 4x1¼, 10s.; 4x1¼, 9s. 3d.; 4x1⅛, 9s.; 4x1, 6s. 6d.

CEDAR.—Imports: 262,032 feet super. The arrivals have been—Lady Franklin, from Ballina; Nemesis and Konoowarra, from Sydney. The cargo, ex Lady Franklin, was offered at auction on 11th inst., when the boards only were sold; 41s. being the best offer for logs, they were withdrawn.

RED AND WHITE PINE (Colonial.)—Imports: Nil. Auction sales.—Nil.

DOORS.—Imports: Nil. Auction sales.—Nil.

LATHS AND PICKETS.—Imports: Laths, 4,634 bundles; Pickets, 2,409 bundles. Sales by auction have been made of Oregon Laths, 4½-feet, at 37s. to 35s. 9d.; spruce, 4½-feet, 35s. 3d., showing a decline on last month's quotations.

SLATES.—Imports: 37,800 pieces. This line arrived in Empire, from Boston. There have been no sales by auction during the month. Auction sales.—Nil.

PLASTER.—Imports: 300 barrels. No business has been done by auction since my last report. Auction sales.—Nil.

CEMENT.—Imports: 5,150 barrels. We have no sales by auction to report this month. Shipments to arrive are very light. Private sales have been made during the month of parcels on arrival at up to 15s. 6d. for principal brands, and there are no stocks now in first hands. Auction sales.—Nil.

GALVANIZED IRON.—Imports: 830 tons. The only sale of auction since our last has been a line of Rabbit brand, 26-gauge, damaged—all faults—at £17 10s. Sales privately have been very light, and but little business has been doing. Orb has had sales at up to £70 10s.; other brands, £19 10s. to £20.

PALINGS.—Auction sales.—11th January—Ex Corinna, 30,000 5-feet palings, at 6s. 3d. per 100.

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, March 4, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., N. W., Washington, D. C. :—

294,486.—Box-making and covering machine—C. H. Manneck & W. Wille, Brooklyn, N. Y., and New Haven, Conn.

294,671.—Clutch friction—J. K. Proctor, assignor to J. Smith Woolen Machinery Co., Philadelphia, Pa.

294,601.—Lathe, (turning)—H. W. Farley, Oswego, Ill.

293,389.—Mortising machine—E. J. Humphreys, Millbury, Mass.

294,724.—Plane, rounder.—H. P. Cope, assignor of one half to J. H. Bissell, Detroit, Michian.

294,718,—Saw buck—B. R. Baker, Northfield, Minn.

294,346.—Saw dipping machine—E. C. Atkins, Indianapolis, Ind.

294,452.—Saw machine band—W. H. Dodge, Mishawaka, Ind.

294,442—Saw mill circular—W. P. Clark, Belmont, N. Y.

492,692.—Saw mill dog—W. H. Snyder, Waynesborough, Pa.

294,710 and 294,711.—W. M. Wilkin, East Saginaw, Mich.

294,439,—Saw swaging machine—P. B. Charboneau, assignor of two thirds to H. A. Fraser & J. B. Barber, Bay City, Mich.

294,672.—Shaft coupling friction—J. K. Proctor & I. W. Huckins, assignors to J. Smith Woolen Machine Co., Philadelphia. Pa.

294,676.—Wood preserving,—W. W. Robinson, Ripon, assignor of one-half to G. N. Lyman, Milwaukee, Wis.

The Winter's Cut on Lake St. Clair.

It is estimated that about five million feet of cottonwood, sycamore, basswood and elm has been cut this winter in Essex county along the shore of Lake St. Clair for manufacturing into hoops and heading. It will be rafted next summer to Detroit and Trenton mills.

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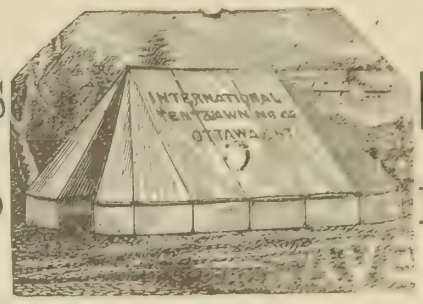
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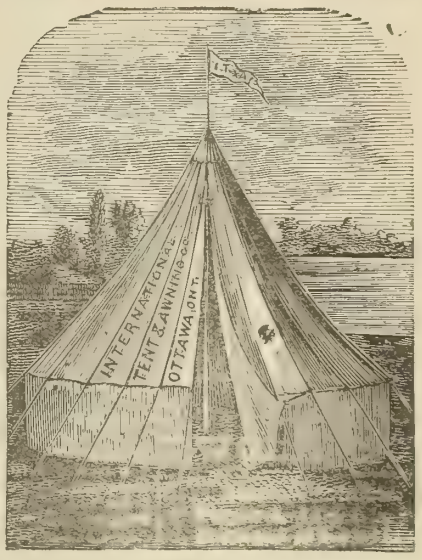
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POPLAR AS A BUILDING TIMBER.

At this time, when so much interest is being manifested in the merits of the poplar when used for building purposes, it may be profitable to consider shortly in our columns the cost of producing the various items required in house-building, and compare it with the foreign timber which has so successfully of late years competed with our home produce. Before going into figures, some of its properties may be generally stated as helping in arriving at a proper comparison with other woods.

In the case of flooring it has been a matter of surprise that poplar has decreased to such an extent in popularity. It is most essential in all kinds of wood for flooring that it should be thoroughly seasoned, but especially is this so in the case of poplar, which shrinks in the drying to a very great extent; but when once thoroughly dry it will not warp or twist, as is the case with some foreign battens, and it is with the greatest difficulty that dry poplar will ignite—in fact, by itself it will rarely make a fire even after being lighted up by some other combustible, but will gradually die out. Poplar, when seasoned, has also in the eyes of every well regulated housekeeper another very important property, which is its nice white color for flooring, and the closeness that the grain has acquired in the drying makes its white color easily retained by scouring, which color it retains for many years, being very unlike the foreign wood, which soon becomes musty and dirty, which no amount of scouring can take out. It may be judged how much poplar shrinks in the drying, and how fine the grain must necessarily become, that thoroughly seasoned only weighs about one-half what the green timber weighs.

It may here be stated that according to eminent authorities its tenacity is from 6,000 to 7,000, comparing very favorable with other woods generally used in house construction.

It should not be forgotten that poplar, when used in a damp building, is very liable to go to decay, but poplar is certainly not an exceptional wood in this respect, as all woods are liable, more or less, to decay when exposed to dampness.

A very important feature in poplar, when comparing its cost as a building wood, is its lightness. When this quality can be combined with moderate strength, as it is in poplar, its value in house construction is much enhanced. Its lightness acts advantageously in two ways: first, as regards the cost of carriage; and secondly, effecting the desirable object of not overburdening a house with heavy-weighted timber. The average weight of seasoned poplar is about eighty cubic feet to a ton, which is considerably lighter than Norwegian whitewood. Of course its heavy weight when in a green state necessitates its being converted and seasoned as near as possible to its place of growth, otherwise extra carriage on double the weight adds very materially to its cost, and when competing with foreign battens it requires every economy to be exercised.

The great length to which poplar grows, and carrying with it its girth, enable the saw-miller to procure extreme length suitable for joists, beams and rafters, and its parallel growth enables the conversion to be done with smallest percentage of waste, which is one of the principal considerations in producing scantlings. When converting poplar into the various items for housebuilding, so many are these sizes that only a very little study is required to utilize the whole tree.

When cutting up a poplar tree into sizes suitable for building material, there need be very little waste, as the flooring board sizes being as thin as from 1 in. and upwards, by breadths from 6 in. to 7 in., and lengths being no great object, the thickh slabs may all be utilized, as recommended above. It effects a considerable saving to have the timber converted at a saw mill as near as possible to the place where it has grown. It is well to have the tree crosscut in suitable lengths from 12 feet and upwards, joists, rafters, &c., being wanted in such various lengths, and the oftener a poplar tree is crosscut, the more profitable does it cut up. The average amount of over-measure in fairly well-grown poplar is about 25 per cent.; of this there is thrown of an entire waste when cutting thick sizes one-half, but in the case of building sizes, which are of such a variety, the amount of slab waste with careful study should not be more than five per cent.: this leaves a clear gain of 20 per cent., or one-fifth of its value. No doubt, in the case of so cheap a wood as poplar, this does not amount to more than 1d. to 1½d. per foot, as the cartage from the woods and other labor expenses have to be paid on the ¼-girth measure. The cost of sawing up poplar into such sizes as are required in building, running from 6x1 for flooring up to 10x3 for joists, averages upon the whole, as near as may be reckoned, somewhere about 3d. per foot cube on the converted sizes.

The whole of the scantling should be immediately piled up for drying, and in the course of six months they will have dried sufficiently as to have reduced the weight so far as to permit their being covered by rail or othewise at a weight of from 70 to 80 feet to a ton; and poplar being a wood which is produced in almost every part of the country, it is unnecessary to send it off from any particular spot to an extreme distance. In the case of the flooring boards they should be thoroughly seasoned before being planed, which, if done, will enable them to put up a much smoother surface than foreign battens; they must not, however, be planed in a green state, as its then fibrous nature prevents the irons from leaving a nice surface, and the shrinkage in seasoning, after being planed, causes it to get very rough. There are no other expenses connected with the coversion of poplar, and it will thus be seen that with careful cutting up all sorts of scantling can be produced at a cheaper price than what even foreign white battens can be delivered to any inland town; we have therefore a superior wood, in every respect cheaper, ready to hand, and this fact only requires to be known and brought prominently befor the attention of architects and builders by our English timber merchants.

From the various reports of poplar sales we gather that standing timber can be purchased at 6d. per foot and under, which with 4d. added for labour and cartage, and 3d. for sawing, deducting gain in over-measure, makes the price such that the poplar as a building timber can successfully compete with the foreign importations. Were the fact of its great superiority in so many respects as a building timber studied more by those interested, we certainly should not find this useful tree from time to time reported as unsaleable, and its rapid growth enables a continuous supply to be forthcoming.

We hope to see a healthy interest taken in this subject, and by its being brought out prominently before the builders very soon to see the poplar taking the place in the market that its qualities demand. It is certainly not a wood that will ever command the price of such timber as larch or hardwoods, but by its more generally use we hope to see the same reasonable competition for it that there is for those other home-grown timbers, so that our own country's produce may be all utilized so far as we are possessed of it.—*Timber Trades Journal.*

LUMBERMEN RAISING ORANGES.

A correspondent of the *Lumber Trades Journal* says:—Tarpon Springs, Fla., January 25, 1884, I have bought myself a place here and expect to build a house as soon as I can, that is, something temporary for the present. Regarding the amount nedessary to get an orange grove, I would say that anywhere from two to five acres of land, properly tended to and brought to bearing, will pay a man an average of $500 per acre each year. To do this and see that it is done proporly, requires one's attention and some outlay of money. Land can be bought in desirable locations from $25 to $90 per acre (that is, at present.) Yesterday I bought 50 acres water front, at $40, and marsh land, which I expect to drain at $10 per acre. Back a ways equally good land will sell for from $8 to $15; of course this is for the bare land, covered pines; clearing costs from $15 to $40 an acre. If one comes to this country and wants to make it profitable from the first, he must go into something that can be realized on, such as vegetables, etc. All such as northern vegetables, strawberries, tomatoes, cucumbers grow here all winter, and can be sent north at exorbitant figures. At the same time one can set out a grove and have it a nucleus for a bank account, which it certainly would be after coming into bearing. I would not advise anyone to come to this country unless he could give some time to it, and personal attention. This is the new part of Florida, and the best, climate grand and healthy, and chances of a rise in property are among the best in the state. For anyone troubled with throat or lung complants, this is the country. Florida in ten years will be the greatest resort in this or any other country. I have had all the lumbering I want, and propose to still make money, and take life comfortable and easy in the garden of the world.

CIRCULAR SAW NOTES.

Extra thin saws require more teeth than thick ones.

For light cross cutting, the pendulum or swing-saw is best.

Care must be taken with inserted-toothed circulars to have the guides clear the teeth.

Any circular saw should balance perfectly in any position before and after toothing.

If the mandrel is a tight fit when cold, it will be apt to spring the saw when it is heated.

Saws over 36 inches in diameter should, where possible, have three bearings for the spindles.

By the use of inserted teeth, circular may be enlarged from one to two inches effective diameter.

Railway sleepers are best sawed by feeding them on an endless chair with loose dogs gripping the end of the timber.

The "gang circular," consisting of several disks on one arbor separated by collars, was patented in England by Sayner & Greenwood, about 1825.

Clamping several circular saws together on one arbor, without any distance pieces, for use in rasping dye woods, etc., was invented by Sayner & Greenwood.

Such machines are beter in hardwood than in soft, as in soft wood the power consumed by rotating cutters is much less excessive, and the cutters do cleaner work.

Emerson makes circular saws to 54 inches diameter, as thin as to 12 gage at the rim, 11 at the centre; 66 to 62 inches in diameter to 10 gauge at the rim and 9 at the centre.

In order to prevent wearing out the guides of a circular it will be well to hold the end of a new oil stone against the disk where the guards touch it; this will polish and furnish a track.

The greener the timber the greater the friction of the saw against the wood, and tbe greater the advantage of the opening wheel or revolving wedge.

For cutting double tenons entirely with saws there must be two flat saws to cut the outer faces or sides, and a wabble or drunken saw to cut out the stock between the inside faces.

It is well to fit swing cross cuts with an automatic stop-gauge to cut any length of board, and moving out of the way as the saw advances to let the last boards cut fall at once out of the way.

The advantage of having separate pedestals for bearings of circular saw mills is that they can be easily taken off for repair or renewal. The disadvantage is that they are somewhat less rigid.

The double two high circular saw was patented in Great Britain in 1824 by Sayner & Greenwood; the original machine having the cant resting on the horizontal rollers and fed by vertical ones.

Where large quantities of heavy logs are to be cross cut, there should be at the entrance to the mill a large sunken circular which can be brought up through the floor so as to cut the log on the ground.

Circular saws are used to cut heavy rough tenons—one cut being made parallel to the wood and another perpendicular to the plane of this cut, to form the shoulder. Generally there are two disks on one arbor, with a distance piece or collar to regulate the thickness of the tenon, while the shoulders are cut by two smaller saws cutting in the same plane, and their bearings working in slides, so that the cut shall be no deeper than is required to meet the cut of the saws forming the face.—*Southern Lumberman.*

National School of Forestry.

It is intended by the promoters of the exhibition, which it is proposed to hold in Edinburgh, Scotland, next summer to make it the starting point of a national School of Forestry, an institution much needed in Great Britain. At present students have to go to schools on the continent for instruction, while there is ample scope for study at home.

THE Hallowell (Maine) Granite Company are cutting the drum for the Yorktown monument. It is one of the largest stones ever "in the slings" in this country. It now weighs forty-five tons, and when cut will weigh about 25 tons. It is to be nine feet and six inches in diameter, and eight feet and ten inches high. The derrick to be used at Yorktown, in erecting this monument, is now being constructed in Boston. The mast, a single stick, will be 102 feet long, with a boom 98 feet in length. They were cut in Oregon, and brought around Cape Horn.

A CONTEMPORARY states that the achievement of Sir John Lubbock in teaching a dog to read printed words has been eclipsed by Professor Hagar of the state normal school at Salem. By the exercise of marvellous patience and skill, the latter has succeeded in doing what has hitherto been regarded as a scientific impossibility. He has taught a woman to drive a nail.

A VERY superior article of cedar shingles are being manufactured in Wahjamega, Tuscola county, Michigan. It is said they are worth $1 per thousand more than pine shingles, will last much longer, and as there is millions of cedar in Northern Michigan, the production of cedar shingles is doubtless destined to become an extensive industry.

LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on Jan. 26th, 1883 and 1884, and also the Consumption for the month of Jan. 1883 and 1884:—

	Stock, Jan. 26th. 1883.	*Stock, Jan. 26th. 1884.*	*Consumption for the month of Jan. 1883.*	*Consumption for the month of Jan., 1884.*
Quebec Square Pine	258,000 ft.	435,000 ft.	64,000 ft.	99,000 ft.
" Waney Board	245,000 "	344,000 "		
St. John Pine	8,000 "	30,000 "	43,000 "	00,000 "
Other Ports Pine	47,000 "	83,000 "	19,000 "	7,000 "
Red Pine	58,000 "	52,000 "	7,000 "	8,000 "
Pitch Pine, hewn	624,000 "	380,000 "	43,000 "	118,000 "
" Sawn	522,000 "	502,000 "	57,000 "	70,000 "
Planks	00,000 "	000,000 "	00,000 "	00,000 "
Dantzic, &c., Fir	46,000 "	127,000 "	23,000 "	8,000 "
Sweden and Norway Fir	21,000 "	126,000 "	00,000 "	00,000
Oak, Canadian and American	304,000 "	336,000 "	31,000 "	14,000 "
" Planks	105,000 "	167,000 "	17,000 "	46,000 "
" Baltic	34,000 "	13,000 "	6,000 "	0,000 "
Elm	43,000 "	14,000 "	8,000 "	8,000 "
Ash	9,000 "	28,000 "	5,000 "	0,000 "
Birch	68,000 "	68,000 "	34,000 "	23,000 "
East India Teak	13,000 "	85,000 "	0,000 "	14,000 "
Greenheart	128,000 "	106,000 "	4,000 "	3,000 "
N. B. & N. S. Spruce Deals	20,122 stds.	19,087 stds.	4,662 stds.	3,777 stds
" Pine	1,500 "	1,963 "		
Quebec Pine & Spruce Deals	8,035 "	8,261 "	447 "	796 "
Baltic Red Deals, &c	4,348 "	4,920 "	184 "	135 "
Baltic Boards	361 "	91 "	39 "	14 "
" prepared Flooring	3,395 "	4,061 "	344 "	180 "

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, Feb. 26, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., N. W., Washington, D. C. :—

294,296,—Chuck lathe—D. E & L. C. Whiton, West Stratford, Conn.

294,067,—Cutter head for wood-working machines—S. Osburn, Davenport, Iowa.

294,097,—Mortise cleaner—S. Van Auken, Oswego, N. Y.

294,001.—Planing machine (wood)—E. Benjamin, South Evanston, Ill.

294,096,—Saw (drag),—G. Valentine, Monticello, Ill.

294,164,—Saw handle—M. E. True, Batavia, N. Y.

294,221,—Saw mill (circular)—J. B. Correll & J. Miller, La Otto, Ind.

294,208,—Saw mill feed, mechanism—S. Dickson, Marcy, Ohio.

294,073,—Saw mill refuse conveyor,—W. J. Perkins, Grand Rapids, Mich.

294,251,—Saw swage—J. Miller, La Otto, Ind.

294,255,—Screw (wood)—S. Montgomery, New York, N. Y.

BOARD OF TRADE RETURNS.

The following are the returns issued by the Board of Trade, for the month of Jan. 1884.

MONTH ENDED 31ST JAN., 1884.

	Quantity. Loads.	Value. £.
Timber (Hewn).		
Russia	2,208	5,109
Sweden and Norway	18,934	29,731
Germany	5,458	14,453
United States	6,773	30,306
British India	2,070	30,981
British North America	3,576	17,650
Other Countries	42,769	46,082
Total	81,788	174,312
Timber (Sawn or Split, Planed or Dressed).		
Russia	7,858	13,364
Sweden and Norway	27,066	62,005
British North America	8,629	19,803
Other Countries	12,600	44,557
Total	56,153	139,729
Staves, (all sizes)	5,907	28,860
Mahogany (tons)	6,522	58,857
Total of Hewn and Sawn	137,941	314,041

THE MANAGEMENT OF BAND-SAWS.

Mr. M. Powis Bale, author of "Saw Mills, Their Arrangement and Management," thus writes to the *Timber Trades Journal* on the subject of band saws :—

"I quite agree with the remark of your correspondent "Subscriber," that band saws with gullet teeth are less liable to break than saws with the roots running to an angle, as the fracture in the bladé is found almost invariably to commence at the point of this angle. Owing, however, to small gullet teeth being more troublesome to sharpen, the angle teeth are, perhaps, more generally employed.

I have had many hundreds of band saws brazed after the following plan, with very satisfactory results :—Take each end of the blade and file down a taper on the opposite sides of the saw of about three teeth points, so that when the two ends of the saw are made to overlap each other the joint, when cleaned off, will be of the same thickness as the rest of the blade. Secure the overlapping ends of the saw well together by small hand vices, and tie them with fine iron wire. Over this bind tightly with brass wire the full length of the overlap; moisten the joint with water, and cover it with powdered borax. Either take a large pair of tongs and make them red hot, or place the saw in a small forge fire made of charcoal, and keep it there till the brass is well melted; let the saw cool gradually, and file the joint to the same gauge as the rest of the blade, and finish it with emery cloth. If this operation is well performed the joint will be scarcely distinguishable. Care must be taken that when brazed the overlapping ends of the saw press well together.

To secure the steady and even working of the saw blade, it is very important that the brazing is neatly done; after a little practice there should, however, not be much difficulty about this.

As regards the number of tooth points to the inch no hard and fast rule can be laid down; for soft wood a few teeth will be sufficient, but for sawing hardwood the teeth should be made shorter, more upright, and with at least one third more points to the inch than for soft. For woods of a woolly fibre, such as English poplar, the teeth of the saw should be deeper than usual, and of coarse space and set, to effect a clearance and overcome its clinging properties. To prevent breakages and produce good sawing, care should be taken that the gauge, width, toothing, sharpening, and setting of the saw are uniform throughout.

Employing Boys Under 16 in Factories.

A bill is now before the senate at Albany to prevent the employment of boys in factories under 16 years of age. Among the provisions of the bill is one making it a misdemeanor for any person having the custody or employment of minors to permit their lives or health to be endangered, or morals to become depraved.

The senators opposed to the bill—Messrs Titus, Fassett, Esty, Thacher, and McCarthy—held that the bill was unwise and impractable; that it would prevent the employment of boys in all factories, and would cause a good deal of misery among a number of families throughout the State. Then to hold owners of factories responsible for the accidents physically or morally to which boys are liable was thought an unreasonable doctrine. Senator Fassett asked whether the owner of a factory who was away at home, leaving his factory in charge of a superintendent could be held responsible for what might happen to a boy there employed? Senator Gilbert admitted that in his absence the owner was not responsible. Where he held owners responsible was when they wilfully caused or permitted the minor's life or limb to be endangered.

Senator Gilbert has a queer idea of the internal workings of a factory. He evidently thinks sthat a mill owner would take delight in hiring mall boys and placing them in some dangerous place to be chewed up by a machine. If the senator is much exercised about the factory boys' morals, let him introduce a bill to abolish some of the dime novel publishing houses in New York city, and every superintendent in the land will thank him sincerely. The bright small boy in a modern factory of to-day is one of the most independent and happy members of the manufacturing fraternity, and is in little danger of being hurt either physically or morally.—*Cotton, Wool and Don.*

AT the last annual meeting of the Western Canadian Loan and Saving Company, the portion of the report referring to the Winnipeg business, after eulogising the local manager, Mr. F. B. Ross, for the able conduct of the company's affairs here, concludes with the statement: "I may further add that the directors have every reason to feel satisfied with the business done in the Prairie Province." Such statements are strong proofs of the advantages offered in Manitoba for investing capitalists.—*Winnipeg Commercial.*

AMERICUS, Ga., *Recorder*: A remarkable cedar-tree is reported as growing in the negro cemetery. From appearance it was planted in a large pitcher at the head of a negro's grave about ten years ago. It burst the bottom out of the pitcher and rooted into the earth. The pitcher still encircles the bottom of the cedar, and is without a crack. The tree fills the pitcher completely, and is about eight or ten feet high. It must have grown from within the pitcher, as it could never have got there otherwise.

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., will send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N. B.—No risk is incurred, as thirty days' trial is allowed.

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OUR GOODS ARE THE BEST IN THE WORLD!

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A SPECIALTY!

At Prices Lower than ever before.

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SHANTY BLANKETS

IN GREAT VARIETY.

Liberal Discount to Large Buyers. Send for Catalogue.

National Manufacturing Co.

160 Sparks Street, Ottawa.

L20 P. O. BOX 345

Market Reports.

TORONTO.

From Our Own Correspondent

MARCH 10.—Continued snow and frost is keeping building operations at a standstill, and dealers are asking the question, if it is possible that this winter will ever have an ending. Numerous building contracts have been commenced, and it was fondly hoped that the business of the season would go steadily on, wheels had commenced to rumble over our streets, but the sleighing is better than at any time during the winter, and the appearance of our streets at present is that of midwinter, and from the outlook at time of writing this letter, our bay may not be open for navigation before the beginning of May. This state of things naturally makes our lumber dealers feel somewhat impatient. During the past winters building has progressed continually during the entire season, but during the present winter it became next to impossible to work at outside contracts. This state of trade has led to considerable competition for the filling of such small bills as were offering, and a consequent cutting on prices; so much so that for the present I feel justified in altering my former quotations, although I am firmly of the opinion that present prices will not remain for any length of time. Retail men have had horses and men idle for a good portion of this tedious winter, and therefore feel like doing business for a very small margin of profit sooner than to be entirely idle, hence the cutting on previous rates.

The railway companies dependent on the lumber traffic as their main stay are also feeling the effects of our long winter and have been holding out inducements to shippers, for month's shipments, at a considerable reduction on standing rates. This, however, has not been taken advantage of to any great extent, wholesale men did not feel like making shipments to dull or nearly stagnant market. Liberality on a more extended scale will have to be adopted by the railway companies, otherwise, after long severe winters like the present, the water routes will, on the opening of navigation, absorb a large part of what would otherwise become part of their traffic. If a distiller, or the owner of a grist mill, desire their cars of grain shunted it is done at once and no charge made, but the unfortunate lumberman, if he requires his car of lumber moved 50 rods westward, must pay for the service. Such is the treatment received by those men who deserve the most liberal treatment at the hands of those companies whose lines have been fostered and enriched nearly solely by the lumbermen.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" " stocks	14 00
Scantling and joist, up to 16 ft	13 00
" " " 18 ft	14 00
" " " 20 ft	15 50
" " " 22 ft	16 00
" " " 24 ft	17 00
" " " 26 ft	17 50
" " " 28 ft	18 00
" " " 30 ft	20 00
" " " 32 ft	21 00
" " " 34 ft	22 50@22 50
" " " 36 ft	24 00
" " " 38 ft	26 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 50
Three uppers, Am. inspection	35 00@45 50
B. M.	
1½-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
¾ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ₩ M	3 00
Sawn Lath	2 75

MONTREAL.

From Our Own Correspondent.

MARCH 8.—Some little stir has been caused here by the action of the House Committee, who reported favorably to Congress upon the Morrison Tariff Bill, which provides that after the 1st of July the following articles shall be placed on the free list, viz.: Timber, sawn boards, hubs for wheels, staves, pickets, laths, clapboards, etc. At present spruce imported from Canada into the United States has to pay a duty of $1 per 1,000 feet and pine $2 per 1,000. Should this bill be sanctioned by Congress it will have the effect of raising the value and increasing the demand of the coarser grades in Canada, as our market will be much nearer and more convenient than the Michigan. Business here is still quiet, but prices are certainly not weakening and they may be stiffening a little. It is reported that owing to the large quantity of snow on the Ottawa, especially on the north side, a large proportion of the logs cannot be hauled to the streams, and if such is the case they cannot be brought down this year. We repeat our late quotations:

Pine, 1st quality, ₩ M	$35 00@40 00
P ne, 2nd " ₩ M	22 00@24 00
Pine, shipping culls, ₩ M	14 00@16 00
Pine, 4th quality deals, ₩ M	11 00@12 00
Pine, mill culls, ₩ M	10 00@12 00
Spruce, ₩ M	10 00@13 00
Hemlock, ₩ M	9 00@10 00
Ash, run of log culls out, ₩ M	20 00@25 00
Bass, " " ₩ M	17 00@20 00
Oak, ₩ M	40 00@50 00
Walnut ₩ M	60 00 100 00
Cherry, ₩ M	60 00@80 00
Butternut, ₩ M	35 00@40 00
Birch, ₩ M	20 00@25 00
Hard Maple, ₩ M	25 00@30 00
Lath, ₩ M	2 50@ 3 00
Shingles, 1st, ₩ M	3 00@ 0 00
Shingles, 2nd, ₩ M	2 50@ 0 00

CORDWOOD.

The recent cold weather has caused quite a brisk demand for wood and large quantities are being brought in by the G. T. R. from townships where there is plenty cut, and waiting for cars to bring it to the city. The C. P. R. supplies are very limited. We have no change to make in our quotations which are ex cartage at the railway station.

Long Maple	$ 7 00
Long Birch	7 00
Long Beech	6 50
Tamarack	5 50

WINNIPEG.

"Business in the lumber line," says the *Commercial* of March 4, "is still in a very slow state, its volume for the week being very light. As there are heavy building contracts to be commenced as soon as spring opens up, it may be considered that the trade is at the darkest hour before the dawn. Quotations are:

Pine lumber, 1st, common boards, dressed	$26 50
do, 2nd, dressed	25 50
do, 1st dressed rough	26 50
do, 2nd do.	25 50
Sheating, rough	25 00
Timber 16 feet and under	24 00
do. over 16 feet, for each additional 2 feet.	1 00
Dimension and joists 16 feet and under	24 00
do. do, over 16 feet for each	1 00
Fencing	25 00
2 and 3 in. battens	30 00
A. stock boards, all widths	50 00
B. do. do.	45 00
C. do. do.	40 00
D. do. do.	35 00
1st clear, 1, 1¼, 1½, and 2 inch	60 00
2nd do. do. do.	56 00
Window and door casings	50 00
Base boards, dressed	50 00
1st pine flooring, siding and ceiling	40 00
2nd do. do. do.	35 00
3rd do. do. do.	30 00
½ inch split siding, dressed	30 00
Spruce lumber—timber 16 feet and under	22 00
do. over 16 feet for each additional 2 feet	1 00
Dimension and joists, 16 feet and under	23 00
do do. over 16 feet, for each additional 2 feet	1 00
Boards	22 00
1st flooring, siding and ceiling,	28 00
XX shingles	5 25
Star A shingles	5 25
X shingles	5 00
do.	4 50
Lath	4 50

OTTAWA.

From Our Own Correspondent.

MARCH 8.—The severe snow storms that have so frequently occurred this winter militated greatly against the taking out of lumber in the shanties on the upper Ottawa. The storms have been almost unprecedented in their severity. All communication between the isolated parts up north and the settlements and villages has been for long periods altogether cut off. Jobbers and others have experienced the greatest difficulty in forwarding supplies to the scene of operations. One or two shanties have been broken up. The total output will not be, it is generally estimated, as large as last season. Danger is apprehended from the high water that will likely follow the thawing season.

THE BUDGET.

Very little reference was made in Sir Leonard Tilley's Budget speech to the lumbering industry. The Finance Minister in the commencement of his speech stated that "Owing to the depreciation in the value of lumber, which is one of our principal exports, owing to over trading in certain branches of the Dominion as well as over imports, we have a depression at the present time, etc."

NO CHANGE.

In the House of Commons a few days ago the Hon. Mackenzie Bowell, Minister of Customs, in reply to a member, stated that the Government would not this year change the excise duty on spruce and pine logs.

DEPRESSION AT ALGOMA MILLS.

Reports have been received here of a serious depression existing among the residents at Algoma Mills. The condition of things is described as distressing. The mills being shut down, the employees are in straightened circumstances owing to their being little other work. The large number of families that were enticed there by inducements in regard to railway work are said to be next door to starving, and those who are fortunate enough to have sufficient money to take them away are leaving the place. There is no work for anybody, and able-bodied men are chopping wood in the bush for their board and clothes.

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ₩ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	45 00@50 00
Pine, good box	22 00@33 00
Pine, 10-in. plank, each	00 42@00 46
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 21
Pine, 10-in. boards, 16 ft., ₩ M	28 00@32 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1½-in. siding, common	18 00@20 00
Pine, 1-in. siding, select	43 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1½-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ₩ M	40 00@43 00
Ash, second quality, ₩ M	25 00@30 00
Cherry, good, ₩ M	60 00@85 00
Cherry, common, ₩ M	25 00@35 00
Oak, good, ₩ M	40 00@43 00
Oak, second quality, ₩ M	20 00@25 00
Basswood, ₩ M	25 00@30 00
Hickory, ₩ M	40 00@40 00
Maple, Canada, ₩ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ₩ M	38 00@40 00
Shingles, shaved, pine, ₩ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 4 90
" clear, "	0 00@ 3 30
" cedar, mixed	0 00@ 3 50
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ₩ M	0 00@ 2 75
Lath, spruce, "	0 00@ 3 00

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

CHICAGO.

The *Northwestern Lumberman* of March. 8, says:—The general condition of the lumber trade, East, West and South, does not vary in any marked degree from that of last week. The principal movement has been west of the lakes, and that mainly from this city to Nebraska, under the stimulus of the low freight rate, which was declared off, and a rate of 15 cents a hundred substituted on March 5. On this account it is expected that the movement westward from this market will fall off for the few day to come, though the increasing building activity of the season will doubtless insure a fair trade at this point from this time onward. Since St. Paul and Minneapolis now have the same rate as that from this city to Missouri river points, it may be anticipated that the demand on stocks at those places will increase. Interior points in Wisconsin report a fair trade. On the whole the condition west of Lake Michigan is improving, so far as the actual demand is concerned. The promising outlook for building improvements in this city, St. Paul, Minneapolis and other large cities of the Northwest, together with prospect of considerable railroad building, a large immigration and improvement in Dakota, Kansas and Nebraska, give encouragement to expect a large consumption of lumber. There is no reason why the same may not be expected in the East, though the lateness of the season in that section of the country is procrastinating the revival of demand in a way that causes some impatience on the part of holders of heavy stocks. The indications of a heavy consumption of lumber at New York and contiguous points are as obvious as they were last year. The same is true of Boston and New England; though it is probably true that, on account of a certain degree of depression in eastern manufacturing the demand for lumber in New England may not be as strong as it was last year.

Receipts of lumber, shingles, etc., for the week ending March 6, as reported by the Lumberman's Exchange:—

	RECEIPTS. Lumber.	Shingles.
1884	4,395,000	80,000
1883	1,933,000	2,792,000

FROM JANUARY 1, 1884, TO MARCH 6, 1884, INCLUSIVE.

	RECEIPTS. Lumber.	Shingles.
1884	32,389,000	3,449,000
1883	20,248,000	14,852,000
Increase	12,141,000	
Decrease		11,403,000

STOCK ON HAND FEB. 1.

	1884.	1883.	1882.
Lumber	583,228,906	600,572,673	471,350,108
Shingles	437,745,250	273,964,750	200,800,347
Lath	62,566,998	65,176,314	46,691,923
Pickets	1,516,999	3,044,790	3,082,823
Cedar posts	453,436	87,260	183,469

BOSTON.

Cotton, Wool and Iron of March 8, says:—Business is moving along quietly, as the weather is still unfavorable for entering upon outside operations. Prices seem to be quite steadily maintained on most kinds of desirable pine lumber. Southern pine is quiet and unchanged. Hardwoods are having a very fair call at steady prices for desirable lots of walnut, ash and cherry.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

GLASGOW.

The *Timber Trades Journal*, of Feb. 23 says: An auction sale of log timber and pine and spruce deals took place at Greenock on the 16th inst. There was a good average attendance, and transactions were to a fair extent, about 400 logs being disposed of, and several parcels of deals.

There is a public sale to note at Glasgow since last writing, Arrivals of wood goods at Clyde ports continue very light; there have been no cargo imports during the week, only a few parcels of oak planks and staves per steamer Liners.

While referring to arrivals per steamers it may be noted that for some time past there was no import of States walnut logs, parcels of which usually keep dropping in pretty frequently, and recent deliveries from the yards here have reduced the stock to a low point. There is some inquiry also for square whitewood logs of good lengths and about 18 and 24 in. square.

The stock of deals has undergone considerable diminution since the beginning of the year. The deliveries in Janurary last from Yorkhill Yards Glasgow, amounted to 72,006, pieces, as against 63,959 pieces in both of log timber and deals, have also been going on actively of late.

TYNE.

The *Timber Trades Journal* of Feb. 23 says: In American goods' stocks are large—much too large for the prospect. This remark applies to all except yellow pine deals, which are becoming scarce, and are held very firmly at advanced rates. Of pit-props and mining timber the stock is still much too heavy, and prices do not improve. The Gothenburg steamers are bringing forward good large parcels of pit-props, which keep the stock still too large. These boats appear to find abundant employment, though at the low rate of 15s. per standard freight it cannot be a very profiteble trade to run them.

There is so far little improvement to note in the general state of trade. House building is brisk, and property appears to sell at remun-

erative prices almost as quickly as erected. In shipbuilding the gloom overthe trade appears to deepen rather than otherwise. Few orders for new ships are in the market, and with the present ruinously low rates of interest upon steamers capital is not likely to be invested to any great extent in this trade.

LONDON.

The *Timber Trades Journal* of Feb. 23, says: The heavy stocks of the past three years are still bearing on the market, and till there is a general clearance we can hardly expect the outlook to brighten. The article be it what it may has to come to market nowadays at a mere nominal cost to induce business, and the competition in most trades has been so sharp that there are very few commodities that will afford a good honest working profit. "It is a long lane that has no turning," says the proverb, and as we have been traversing the long lane for some considerable time, we may not unnaturally look for the turning point, and, even should the lane be longer than we expected, the end of it must be reached some day.

There is one thing can be safely said in connection with the recent sale, that if prices did not show any signs of advancing they were certainly not any weaker (if we except flooring), which is so far satisfactory; still, with the small quantity of Swedish deals submitted, the prices realized for the few lots sold were not encouraging.

All the efforts of the shippers in the Baltic as to limiting the cutting, about which there has been so much said, have up to the present produced little effect on this market, and f.o.b. offers are looked at with little desire on the part of merchants to close with them.

The agents here that have been around the coast trying to place goods have nearly all the same story to tell, and very little encouragement is given to prosecute long journeys without a great deal of discretionary power as to prices.

In the absence of sales it is useless quoting these, but we believe these are much the same as were mentioned in a former number.

If trade does not revive shortly we may look for considerable modifications at the shipping ports before the month of March is over.

There can hardly be a doubt but that the employment of steamers as carriers in the wood trade has greatly assisted in its present disorganization, and importers need not now be quite so anxious about purchasing early as they used to be when vessels were more difficult to obtain and the voyages occupied more time. Hence we must not lay too much stress upon the fact of February slipping away and hardly any business closed. It would be more satisfactory to record great sales of f.o.w. goods, but with assistance of steamers the quays could now be as fully occupied in March as they would have been under the old style of importing, had all the buying been done in December and January.

In trying to account for the unparalleled dulness of trade, we can only arrive at the conclusion that all of us have been going too fast, and must now draw rein a bit to recover from the heavy strain of previous seasons. Building operations that were so active ten or a dozen years ago had led to an increased consumption of timber, which in the shape of heavy importations has almost reached a chronic stage, from which it is difficult to extricate ourselves.

The supplies now do not harmonize as much as formerly with the state of demand, and keep pouring in as if the stream would never cease. Yards are glutted, and every channel apparently choked; bnt still the goods are forced on the market, however unwilling it is to bear the burden.

It is all very well to compare the present, or rather the past, season's imports with others that have gone before, and say it was after all only an average one; but without we take account of the different states of activity in which the building and other trades were at those different periods the comparison is manifestly unfair. Should we import to London this year considerably less than what we did last, supposing the use for the stuff to have further diminished, the effect on the market would be much the same as if the supply should be greater than other seasons, but with plenty of channels open for its employment.

We cannot help calling attention to the very small compass the 3x9 and 3x11 Swedish deals now in stock are reduced to in all qualities.

Referring to Messrs. Churchill & Sim's catalogue of next week's sale, we note there are only 12,000 Swedish regular deals and battens without reserve, and 50,000 with reserve, both together making up about a decent-sized steamer's cargo.

At the Baltic this week there were only about 30,000 pieces of Swedish deals without reserve; such a quantity of Gulf of Bothnia deals in the public sales at this time of year is almost without precedent. In contrast to the present time the sales of last year stand out very boldly, and early in March last at one public auction about a million pieces of Swedish deals and battens were forced on the market. This year, however, there are not likely to be such sales, as there is not the quantity of goods in first hands to supply them.

The present small stock for public sale and the increase in the deliveries must, we think, have a favorable effect on prices sooner or later. Altogether Messrs. Churchill & Sim's catalogue for next week is the smallest the firm have issued for some time.

LIVERPOOL.

The *Timber Trades Journal* of Feb. 23, says: The condition of our trade continous without any alteration from the lethargic condition in which it has been for some weeks past. Buyers seem at present to be inclined to buy only for their most pressing wants, and are not disposed to buy even at the low prices now ruling; hence a large portion of the consumptive demand partakes greatly of a retail character.

Spruce deals are, perhaps, a little firmer, and as the shipments for the immediate future appear to be within a moderate compass, there is some reason for prices looking up; much, however, will depend upon the state of the freight market. Pitch pine timber especially sawn wood seems to be sent forward to Liverpool without much regard to its natural wants or to the present state of its stocks, and it is, therefore, no matter for surprise that a very strong disinclination to contract for future deliveries should be shown by merchants who have for some years past done a large amount of business in this way. On the other hand, for cargoes sent here on consignment the prices offered by private treaty are usually so low that the consignee is left with no alternative but to submit the cargoes to public competition, in order to place himself upon a firm basis with the shipper; hence the frequency with which we have cargo after cargo put up for sale by public auction. Such was the case with the cargo sold last week; though after all it is questionable whether any substantial gain was made beyond what could have been got by private treaty.

Suit Against a Lumber Company.

MONTREAL, March 6.—The Scottish American Assurance Company, through Messrs. Tait and Abbotts, has entered suit for $193,000 against the British Canadian Lumber and Timber Company for advances made by plaintiff.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain and cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup for children teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentery and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for children teething is pleasant to the taste, and is the perscription of one of the oldest and best female nurses and physicians in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

A DOUBLE BENEFIT.—James Moore, a prominent resident of Leamington, writes that he cured himself of Dyspepsia of a year's duration by one bottle of Burdock Blood Bitters, and two bottles cured his wife who had been for years a sufferer from the disease. He conscientiously recommends it to all suffering from similar troubles.

The Improved CLIMAX Sash Lock

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LOWEST MARKET PRICES.

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CRUSHED BY THE CARS.—A little son of John Spinks, Toronto, had his foot crushed by a G. T. R. Express train some time ago. Two doctors attended him without benefit, and amputation was proposed, but Hagyard's Yellow Oil was tried, which give prompt relief and effected a speedy cure, even removing all stiffness of the joint.

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Are pleasant to take. Contain their own Purgative. Is a safe, sure, and *effectual destroyer of worms* in Children or Adults.

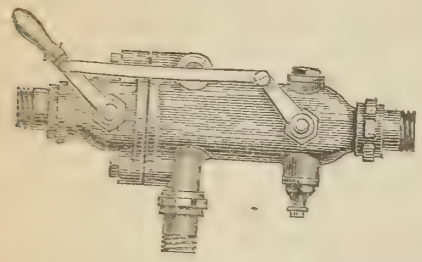
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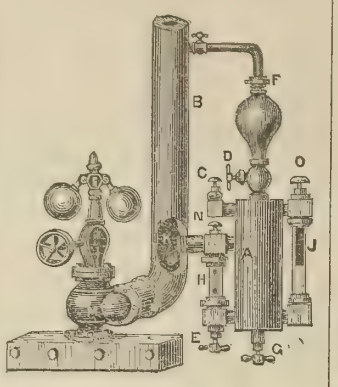
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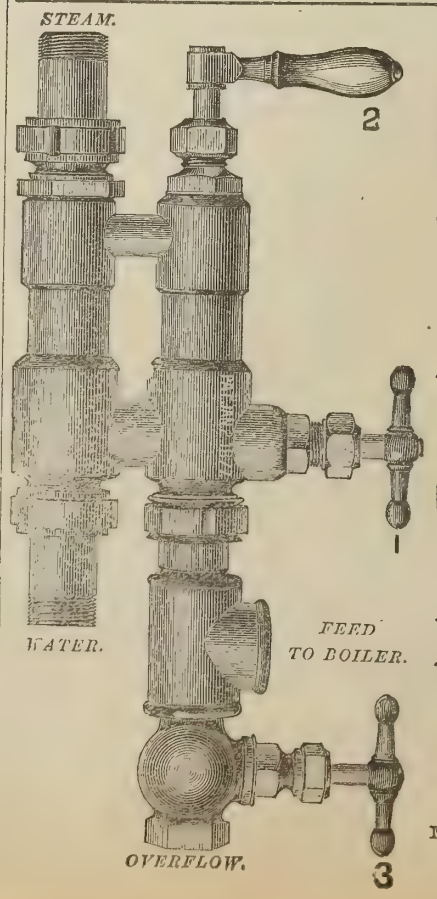
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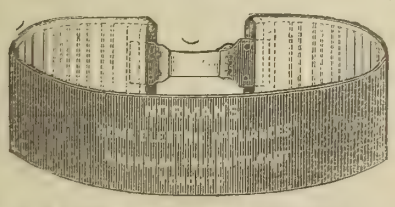
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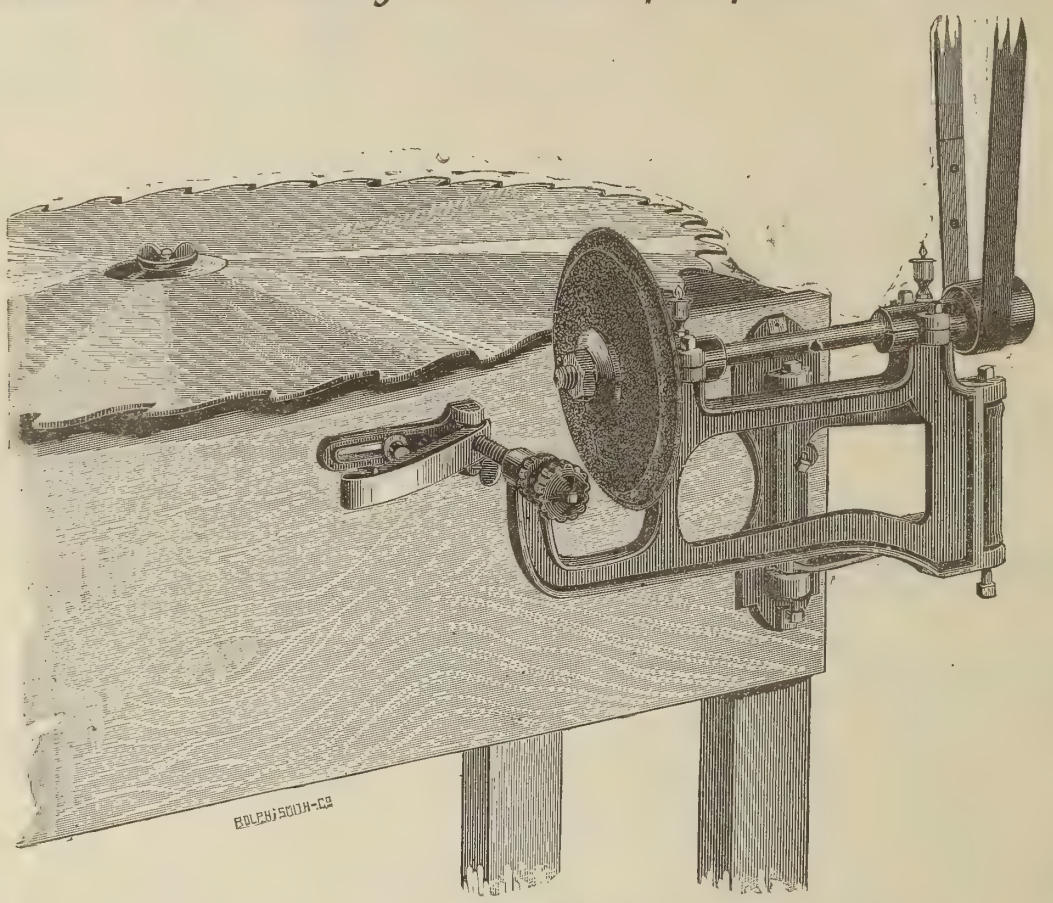
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The Handiest Machine for these purposes ever Invented.

Don't Heat!

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Accurate!

Works Fast!

Complete!

Lumbering Season, 1884

Saw Mill Owners in providing for the season of 1884, ought not to lose sight of ROGERS' SAW GUMMER for it will save them more money in proportion to the amount invested than any other machine.

Only $30, including Emery Wheel; Table and Countershaft, $10 extra.

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"The Rogers' Saw Gummer purchased from you gives good satisfaction, * * it cannot be beat."

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"We are well pleased with the Gummer."

W. W. BELDING, Wyevale, writes:—
"I have the Gummer running and it is giving good satisfaction."

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☞Manufacturers of Hart's Celebrated Patent Wire Strengthened Emery and Corundum Wheels.

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OUR HEAVY SINGLE CIRCULAR SAW RIG, Complete, with or without Top Saw, Rack, Rope, or our Improved Steam Feed (Patent applied for), is acknowledged by our leading lumbermen to be a first-class article, got up in the best manner possible, and furnished with Headblocks and Dogs to suit our Customers. We also manufacture a lighter Circular Rig for the smaller class of mills (or where there are two circulars required in the same mill), which is exceedingly smart in its movements, and supplies a long felt want in this direction.

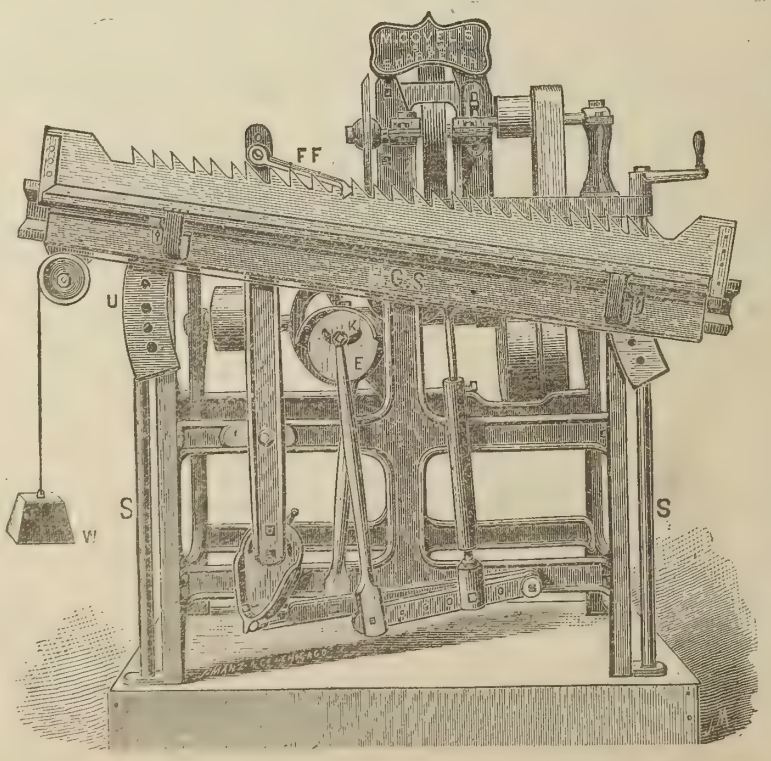
OUR PATENT TWIN CIRCULAR RIG with Rack, Rope, or our Improved Steam Feed (Patent applied for), is now the favourite Machine for Slabbing Logs, and is acknowledged by all to be the smartest and the best Machine for this purpose in the market.

OUR IRON FRAME OSCILLATING, SLABBING and STOCK GANGS are fitted up with the most improved Machinery, which for Strength, Class of Workmanship and Design cannot be excelled.

OUR DOUBLE EDGER is the best, most useful and most substantial article of the kind in the Market, which is proven by the number we are called upon to supply; we put on any desirable number of saws on the Spindle; they can be arranged to suit the work especially required to be done. We also furnish them with one or two Guages for sawing Scantling or re-sawing Lumber.

Our PATTERN WROUGHT IRON ENDLESS LOG CHAIN for drawing up logs, keeping a constant supply of logs in the mill, and requires, from its construction, very little power to drive it. We have furnished the majority of the best Mills in Canada with this Chain, and many Mills in the United States are using it. We also supply when required Trout's Log Counter (Patent applied for), to count the logs as they are drawn into the Mill. By this simple device the proprietor is able at a glance to know at any time during the day how many pieces have been cut, thus enabling him to judge if the Mill is up to her work.

Our most improved LOG CANTERS for Turning Logs on Carriage. We also furnis 1 them with Weirs' Patent Incline Attachment for rolling logs from Skids on to Carriage.



We still continue to manufacture THE

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We also manufacture LATH MACHINES, LATH BOLTERS, LUMBER TRIMMERS, LUMBER MARKERS, SLASH TABLES, TIMBER CANTERS, LOG DECK CANTERS, SHINGLE MACHINES, KNOT SAWS, DRAG SAWS, SHINGLE JOINTERS, BOLTERS, WATER WHEELS, and a variety of the best kinds of Wrought Iron Refuse and Sawdust Carrier Chain (that can be relied on to do their work). Everything required in a first-class Saw Mill.

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THE CANADA LUMBERMAN



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The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

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VOL. 4. PETERBOROUGH, ONT., APRIL 1, 1884. NO. 7.

DESTROYING THE FORESTS.

The St. Paul *Pioneer Press* says:—In the issue of Saturday last there appeared an article from the pen of James S. Brisbrin, showing the effect of the destruction or cultivation of timber on the rainfall of the country. The article has elicited from Mr. Schatzka, a civil engineer and landscape gardener now employed at Lakewood cemetery, Minneapolis, some further interesting information. Mr. Schatzka is a graduate of the forest academy of Tharand, Saxony, and has written much and lectured on forestry. He says:—"I want to take this issue at the outset with Gen. Brisbrin, when he says: "Let every man remember when he fells a big tree that he is doing something which in his life time he cannot replace; and let him cut down just as few trees as possible." I say cut down every tree that comes to maturity, for after that the tree will deteriorate and become valueless altogether. But the man who has the benefit of a matured product, the cultivation of which has cost him nothing, is morally bound to replace the same, and thereby keep up the capital. He has had the compound interest; why not replace the capital? Trees come to maturity like other organized bodies, and it is poor economy to let your products go to waste. But to gain growth and time, a little nursery should be kept, out of which to replace such trees as become ripe for the woodman's axe. A small area of ground will suffice for this purpose. As there is coal enough in this country for fuel, it is important that trees be used for timber purposes. It is desirable, therefore, to have the trunks without branches as high up as possible. Trees for timber purposes should, therefore, be planted thickly together to make them grow straight and high without spreading. The lower branches will thus be too much shaded to live, and will die and fall off without leaving a mark on the trunk. After the necessary height is realized, or in the course of time, when they commence to show signs of crowded condition, a gradual thinning out should take place, but not too much at a time. We are aware that the national agricultural department in Washington has made several efforts to have the Government take the preservation and restoration of the forests in hand, and that the secretary of the interior, as authorized by Congress, has adopted some means to prevent the cutting down of forests in the territories. But all this is not sufficient for the preservation of that extent of forests which is needed for agricultural as well as manufacturing purposes. The forests should cover from one-quarter to one-third of the area of a country, if it is to be healthy and fitted to fulfill the conditions under which agriculture may be carried on with success. And not only is the extent of the forest to be considered. We must also take into account their proper distribution over the face if the country if we would secure the utmost possible benefit to its inhabitants. The shelter and the healthful atmosphere of the forests in the far western territories have no effect upon the inhabitants of Wisconsin and New York. When we consider that some soils are in reality not fit for agriculture, and have to be termed on the assessor's list and on the maps as "uncultured land," would it not be a welcome sight to see young forests springing up in such places, and, though growing slowly benefitting the surrounding agricultural districts with a humid atmosphere, shelter against high winds, and against changes of temperature, frequently so sudden and disastrous?

In Europe the various governments have found it necessary to make the care of the forests a particular subject of consideration and legislation, and have created special official bureaus under the management of competent men who had to serve a long apprenticeship, graduate in the science and arts of forest culture, and who made the forests a source of revenue to the governments, amounting to millions of dollars from the poorest soil of that country. While the direct net income of the forests is counted by millions, their influence upon health and agriculture cannot be estimated. And when we consider the rapid increase of population in our own country, the demands already made upon the forests, and the present comparative scarcity of lumber, it is easy to see that here also similar methods will have to be adopted.

It will perhaps be objected, that in the vast areas of these states the millions of acres of woodland still remaining will be sufficient for all the wants of the country for years to come; but it must be remembered—

1st—That this abundance of wood is found just in those parts of the country where it is least needed, and that in consequence of the expense of bringing so bulky an article as lumber to the centres of demand, it is comparatively valueless where produced, and it is for the most part left to fall before the axe of the settler.

2nd—That two-thirds of the timber left to us is of such a quality as to be only fit for fuel,

3rd—That in the census and tax statements a large area is classed as woods, without deserving this classification.

4th—That Chicago alone employs a capital of $80,000,000 in the lumber trade, and hundreds of thousands of acres of timber are annually sacrificed.

5th—That Michigan and Wisconsin, the main timber states, which had 10,000,000 acres of the finest timber before settlement began, have only about 2,000,000 acres left, and this, at the present rate, will be cut down in about five years.

6th—That according to the census of 1860, the value of the lumber improvements in the United States was $3,332,522,000. All this had been cut from the soil, and most of it within 30 years previous, and nothing has been done to replace it.

7th—That there are five hundred thousand artizans in wood in this country, and we estimate the value of their labor at $1,000 each per annum, we have an aggregate of $500,000,000 of wood per annum consumed as raw material for their use.

8th—That it takes one and one-third acres, on the average, to produce one cord of wood annually.

9th—That it takes three hundred acres for the production of wood sufficient to build and keep up one mile of railroad year by year.

10th—That the United States sends $11,000,000 per annum to Canada for lumber, while millions of acres of land capable of producing the finest timber, are lying waste in our own country.

11th—That the farmer from year to year cuts down vast forests to enlarge his fields, and only saves what will suffice for his domestic uses, and seldom that.

12th—That the population of the country is daily increasing, the wood-consuming industries are developing year by year to large dimensions, and hundreds of miles of new railroad are added annually to those already in operation; and in general, that while the wood-producing area has been greatly reduced, the demands upon the wood have been multiplied; and since the larger area has bean so greatly reduced in supplying the smaller demands, how will the smaller area supply the larger consumption? From the above facts it is evident that unless measures are speedily taken to replace by planting the supplies consumed in the destruction of our old forests, there will be an actual famine for wood in this country within the next 30 years.

Can this matter of forest culture be safely left to private enterprise? A period of from 80 to 200 years is requieed for the growth and maturity of valuable forest trees. Now, if so many neglect to plant fruit trees and grape vines, the product of which they can enjoy in a few years, will they plant forest trees, whose completed growth they will never see? To carry on the culture of forest trees successfully, it is also necessary that extensive regions should be devoted to it, for the trees from year to year as are ready for the woodman's axe are necessarily a considerable distance apart. In small, isolated areas there could not be an economical adaptation of the means to the end. Forest culture can only be carried on upon a large scale. But there is still another reason why the supply of timber cannot be left to private parties. There is needed for the profitable growth of forest trees a scientific and technical knowledge which few farmers have it in their power to acquire. This knowledge, so far as it is not purely scientific, must necessarily be, to a great degree, traditional. It cannot be acquired by personal experience. The mistakes of one year cannot be discovered, as in the case of ordinary farm crops, by the immediate results, for the forest tree's life outmeasures man's; the cultivator sees his error, if at all, when it is too late to remedy it. In Germany, therefore, where these facts are fully appreciated, the forester has to undergo a special scientific and technical education. He has to serve a long apprenticeship. The culture of trees and the management of the forests become the business and study of his life. From all this and numerous other reasons, it is evident that upon the government rests the necessity and duty of providing against the anticipated deficiency in the supply of timber, by initiating and controlling the planting of new forests, as well as the preservation of the old. It is not necessary to cite the disastrous consequences which have occurred in those parts of the globe, where the destruction of forests has taken, and which have been described by travellers in a most alarming manner. They are doubtless familiar to others as well as myself. In 1869 I sent a memorial to Congress in respect to the destruction of our old forests. I have not changed my opinion on this subject since, and believe that it cannot be refuted. I hope that all far sighted men will share the apprehension with me, and assist me in my patriotic recommendation.

American Forestry Congress.

The annual meeting of the American Forestry Congress will commence on the 9th of May next at Washington, the sessions being held in the rooms of the Department of Agriculture. The object of holding the meeting at this early date is with the view of inflencing the members of Congress, which will be then in session. Amongst other subjects to be discussed is that of the laws and regulations regarding the tenure and management of the timber lands in Canada.

Wind Falls.

The late tornadoes, rather than gales, which have passed over these islands cannot fail to have some effect on the foreign timber trade, for when we read of trees being blown down by the two hundred thousand within a circumference of twenty miles diameter, and one hundred thousand on a single nobleman's estate in Scotland, &c., we can only conclude that all this timber being brought into the country markets—not a tithe of which would probably have been cut down for use this year—will bar so much of foreign wood, that under other circumstances might have found a remunerative market. Many of these fallen trees will fetch a small price, for which when standing an offer of fifty pounds would have been laughed at.—*Timber Trades Journal.*

EXPERIMENTS ON AMERICAN WOODS.

We take from the Pittsburgh *Builder* the following paper by Prof. Sharples of Boston, Massachusetts :—

Under the act providing for the taking of the Tenth Census, the superintendent was authorized to appoint experts to inquire into special industries; accordingly Professor Charles S. Sargent was appointed to gather statistics in relation to the forest industries.

As Chief of the Department of Forestry of the Tenth Census he has been busily engaged in this work since the fall of 1879. Soon after his appointment he became convinced that it would be desirable to make an examination of the fuel value of the various woods of the United States, and this work was placed in my hands.

At the same time I made the suggestion that while we had the opportunity it would be well to test also the strength of these woods. The suggestion was adopted and Professor Sargent at once set his agents to work in various parts of the country to collect specimens of all the trees growing in their localities, employing as a rule, botanists who were familiar with the flora of the region in which they were at work. The result of this work was the collection of over 1,300 specimens of wood, comprising over 400 species and varieties, nearly 100 of which had not before been described as trees existing in the United States.

The ash and specific gravity of every specimen in this collection has been determined, in most cases in duplicate, about 2,600 ash and 2,800 specific gravities determinations having been made. About 325 species were further tested for transfer strength and resistance to crushing. In this series about 1,300 specimens were tested. As each of these was tested in three different ways, it made in all about 3,900 tests. The specific gravity of each specimen in this last series was also determined, thus making in all about 10,600 tests that were made on the specimens. Many of these tests, however, included not only a single test, but often a series of tests that required at least ten entries on the final report, as I shall explain further in this paper.

In addition to the tests already spoken, 79 tests were made of the carbon and hydrogen in a like number of specimens.

These tests have already, so far as the results of the ash and specific gravity of the dry wood is concered, been published in Forestry Bulletin No. 22. The carbon and hydrogen determinations are to be found in Bulletin No. 18, while the tannin in the bark of a few of the most promising trees found in Bulletin No. 24.

A Bulletin shortly to be published is to give the deflections under various loads of woods tested in this manner, and the weight under which they failed, together with the force necessary to crush, in the direction of the fibre, pieces, whose length was equal to eight diameters. In addition to the tables published in the Bulletins, the final report will give the force necessary to indent the wood.

This series of tests is felt to be incomplete in many ways, and with the experience that has been gained in the work could doubtless be improved. A brief description of the methods used may be of interest.

Each specimen as soon as received was given a number, and this number has been constantly repeated in all the work done on that specimen; it is designated in the reports as the office number, and wherever met with always refers to the same tree.

After numbering, the sticks were at once sawed into bars five centimeters square. These pieces were then seasoned by air drying. During the first winter they were kept in a room warmed by a stove to about 70° F. After that they were removed to a timber loft at Watertown Arsenal, where they were kept until they were dressed for the final tests.

Two blocks of fifteen centimeters in length were taken from each specimen and dried rapidly with steam heat until they had lost most of their moisture. From these pieces, blocks of exactly ten centimeters in length and about thirty-five millimeters square were dressed out. These were then placed in an oven which was maintained at a constant temperature of 100° until the blocks were perfectly dry. After they had ceased to lose weight, they were carefully measured with a micrometer caliper and weighed. From the measurement and weight it was easy to calculate the specific gravity.

The ends removed from these blocks were used for determing the ash. They weighed from ten to twenty grams and thus gave quite appreciable amounts of ash. The ash was determined by drying the wood in the same manner as the specific gravity blocks, then carefully burned in a platinum dish in a muffle-furnace heated by gas. The heat was so regulated as to burn the ash perfectly white without melting it. In most cases the ash was left in the exact shape that it occupied in the wood. It was judged best to report the ash exactly as found, and not attempt to make any correction, on account of the carbon dioxide that might have been lost from the calcic carbonate present.

From these results, the approximate fuel-value was calculated, assuming that equal weights of woods have the same fuel-value. This value is supposed to be given more correctly by taking as the weight of the wood, not the specific gravity, but the weight of a cubic decimeter, minus the ash contained in it. The ash evidently adds nothing to the fuel-value, while it does add to the weight. This assumption, which is the one generally made, is not strictly true, but it is near enough for all practical purposes. It is founded on experiments made by Count Rumford and Marcus Bull.

The carbon and hydrogen determinations were made by burning fine sawdust in a platinum boat in a current of oxygen and collecting the products in the usual way. These analyses were calculated on the dry wood. The determinations may be conveniently divided into two classes—those of the coniferous and non-coniferous.

The coniferous woods examined, with two exceptions, gave larger amounts of carbon than the hard woods. These two exceptions were the common white cedar or arbor vitæ of the Gorth, and the black spruce or Picca nigra, neither of which would be selected as valuable fuel. The average composition of twenty-nine specimens of coniferous woods examined was—carbon, 53·21; hydrogen, 6·45; ash, ·32; specific gravity, ·5624. Fuel-value be weight, 4488·3; by volume, 2524·2.

For the non-coniferous woods the average results of forty-one determinations were—carbon, 49·53; hydrogen, 6·33; ash, ·66; specific gravity, ·6951. Fuel-value by weight, 3993·9; by volume, 2776·1. These latter values agree very closely with those given in the books, as the results of the analysis of European woods. It is rather singular that with the exception of fir, no coniferous woods have been reported on in Europe.

After the long sticks of wood had become thoroughly seasoned, they were dressed out to the exact size of four centimeters square, and were sawed as near as possible to the length of eleven decimeters. They were then tested on the Watertown machine. In testing, the stick was placed in a perpendicular position resting on supports that were exactly one meter apart. The force was then applied at the centre of the length by means of an iron bearing, which had a length a little greater than the width of the stick and a radius of 12·5 millimeters. The weights were slowly applied, fifty kilograms at a time, and after each weight was added a deflection was noted. After 200 kilograms had been added, the weights were removed and the set read; the weights were again applied, the reading again taken at 200 kilograms, and then at every fifty kilograms until the stick was broken, the breaking weight being noted. In making the report, the co-efficient of elasticity for the weights 50 and 100 have been calculated; also the modulus of rupture.

So far I can only give the most general results in regard to these tests. In the first place we have not been able to establish any general law in regard to the direction in which a stick is the strongest, that is, parallel or perpendicular to the annual rings.

The results have shown however, that it is by no means necessary to break two sticks to show which is the strongest, provided they are of the same kind of wood. The weak stick will show the strongest deflections from the start. The strongest stick found was a specimen of locust, but following closely after it were specimens of hickory and Southern pine. Ash was found to stand well up to a certain point, and then it gave way suddenly and without warning, generally shattering badly. The California redwood was another that shattered very much. White oak was found to be inferior in strength to several other oaks, and to Southern pine, the average breaking weight of eight specimens of Quercus prinoides or the cow oak of t e South was 528 kilograms.

The average of 27 specimens of Pinus Australis was 490 kilograms.

The average of 36 specimens of the Douglas fir from the Pacific coast was 374 kilograms, and of 6 specimens of the Western larch was 523 kilograms.

13 specimens of the white pinus (Pinus Strobus) gave 274 kilograms.

11 specimens of beech gave an average of 454 kilograms.

16 specimens of Carya sulcata averaged 464 kilograms.

20 specimens of white hickory (Carya alba) averaged 512 kilograms.

24 specimens of white ash (Fraxinus Americana) averaged 378 kilograms.

8 specimens of locust averaged 378 kilograms.

The next series of tests which were made, consisting in taking specimens of the same size, square as before, and 32 centimeters long, and compressing them in the direction of their fibres. Here again both locust and Southern pine stood up well.

9 specimens of locust stood an average weight of 11,206 kilograms.

4 specimens of the Western larch stood an average of 10,660 kilograms.

35 specimens of white oak stood an average of 8,183 kilograms.

24 specimens of Pinus Australis stood an average of 10,498 kilograms.

The third series of tests was to find the force necessary to indent the wood at right angles to the grain. These tests are not finished yet, and I have made no examination of the results. They are made on blocks 4 centimeters square and 16 centimeters long, the bearing of such a size that it makes an impression on the block, which extends from side to side of the block and is of the same length.

In closing this paper I wish to express my thanks to Colonel Laidley for valuable suggestions made during the progress of the work, and to Mr. Howard for the able manner in which he has executed the tests. These tests have been made at the joint expense of the War Department and the Census Bureau, the machine having been put at our service by order of the Secretary of War.

The tests will probably be published in the annual report of the testing machine, calculated in feet and pounds.

THE HON. O. B. POTTER ON FREE LUMBER.

The following is a letter from the Hon. O. B. Potter in reply to a leading lumber firm in Albany, whose lumber interest lie in Michigan, and whose views have evidently been against the repeal of the lumber duties.

[In reference to it the *Sun* says :—"We are against the maintenance of the lumber duty; we are against the swift destruction of our forests which is now going on."]

GRATWICK, SMITH & FRYAR LUMBER CO., Towanda, N. Y., and the HON. ERASTUS CORNING, Albany, N. Y.

GENTLEMEN,—I am unable to agree with the conclusions expressed in yours of March 12.

In reply to your first position, that lumber can be produced at least 25 per cent. cheaper in Canada than in the United States, I say, if this is limited to white pine, I wholly agree to your statement. This is the best and strongest reason why this lumber should be admitted free of duty. White pine, as you know, has already on account of its growing scarcity in the United States, reached a price which makes its use in dwellings of the middle and laboring classes very burdensome, if not beyond reach. Why should the use of this timber be made difficult or impossible in the dwellings of the great majority of the people of the country in order to increase the profits of the capital engaged in the lumber business, and to hasten the destruction of the remnants of our pine forests in Michigan and elsewhere in the Northern States?

To your second point I reply: If the three hundred million dollars and one million men now engaged in hastening the premature destruction of our remaining pine forests cannot continue this destruction profitably without the stimulus of a tax to be paid by the thrity-five millions in the Northern States, to whom this white pine lumber is a necessity, I am glad. The removal of the duty will then preserve for some time longer our own pine forests. While they grow and greatly increase in value for our future use, the growth of our towns and cities and the building of houses for our people will not be retarded, but be helped and hastened by cheaper white pine lumber.

Your third point that "nine-tenths of the people who use lumber are above the laboring classes, and the duty is not in any sense a burden upon the community," cannot be maintained. This duty is a most oppressive and unnecessary tax upon and against the homes of the middle and laboring classes. It is within my own experience that houses in New England have remained for years unfinished in order to meet the more necessary expenses of education, while sons slept under bare rafters in unfinished rooms. I am mistaken if this is not the case now with many homes throughout the country of large families and small means, who would appreciate and enjoy well finished rooms.

To your fourth point, that without this duty lumber for the Eastern States will come from Canada, and that railroads would lose the profits which would result from the early destruction of the forests still remaining at the West, and their transportation by rail to the East, I hope this is so, because then, with the removal of this duty, the East will be more cheaply supplied with lumber, while the forests of Michigan will remain for the use of the great and growing West, for which they will soon all be needed, and will be wholly inadequate. I cannot think 35,000,000 people should be oppressively taxed in order to enable railroads to make profits in the premature destruction and transportation of our remaining Western forests.

To your fifth point I answer that the price of pine lumber wholly negatives your position. This price has nearly or quite doubled within thirty years, and is constantly advancing. But if your statement be true, that the forests of Michigan and Wisconsin will last for fifty years, I ask what will be the condition of the vast and still growing West then with 100,000,000 people and no forests remaining? Fifty years is a short time in the life of a nation.

In reply to your sixth and seventh points, you cannot be unaware that the yellow pine of the Southern States is not, and never can be, advantageously used for the inside finish of houses, including doors, sashes, and casings; nor in the manufacture of furniture, where white pine is a necessity; nor for anything beyond beams, floors and wainscoting. Yellow pine and white pine are, as you know, best used together in the same finishing purposes, the greater will be the demand for Southern pine for beams, floors, and other purposes for which it can be used. All the white pine and yellow pine of the country will not be too much for its certain growth during the lives of those now born, if our Government shall be steadily administered to the great ends of liberty and self-government for which it was created.

Very truly yours,

O. B. POTTER.

House of Representatives, Washington, March 14.

Herr Lasker on Forest Conservation.

Herr Lasker, the eminent German statesman, deprecated the prodigal waste of the forests with which this continent is so prodigally endowed. He pointed out the fact that, while naturally we are so far superior to Germany in this regard, the older country was far more enlightened in its policy as to forests. There the people and government were at the utmost pains to conserve and replace the occasionally denuded parks. While there the grand, primeval trees were not encountered in anything like

the prodigious stretches characteristic of the United States, there was the most preserving replacement of every tree which was compulsorily sacrificed for fuel or other purposes. He suggested that, while necessity would ultimately compel us to adopt the European plan in this matter, it would be well to anticipate the iron exigency of the future, thus saving us much positive damage and vexation on the principle that an ounce of prevention is worth a pound of cure.

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, March 11, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., N. W., Washington, D. C. :—

294,762.—Bit-brace Ratchet—W. R. Clarkson, Buffalo, N. W.

294,985.—Gage attachment for bits, &c.—J. Fuller, sr., Seneca, Kan.

294,919.—Plane bench—J. Siegley, Wilkes Barre' Pa.

298,825.—Plane bench—J. A. Traunt, New Britain, Conn.

294,914.—Planing machine—J. A. Roberts, assignor of one-half to D. M. Dwight, Detroit, Mich.

294,804.—Saw-elevator drag—W. J. Perkins, Grand Rapids, Mich.

295,115.—Saw filing and setting machine, J. S. Detrick and W. T. Smith, Baltimore, Md.

295,133.—Saw filing machine—W. Tucker, E. Brookfield, Mass.

294,989.—Machine shaft and bearings—G. S. Gates, Athol, Mass.

295,006.—Shingle machine—E. B. Hewett, and G. F. James, Tenino, Washington Territory.

294,936.—Timber and lumber stamp—L. Thrush & L. Wilson, Brookville, Pa.

294.777.—Wood-worker's dog—J. Forbes, San Francisco, Cal.

PATENTS ISSUED MARCH 18.

295,178.—Bench dog and clamp combined—C. C. Johnson, Springfield, Vt., assignor to Millers Falls, Co., Millers Falls, Mass.

295,407.—Chuck brace—G. W. Kerr, Bridgeport, Conn.

295,229 and 225,230.—(two patents)—Chuck lathe—G. A. Cotton, assignor of one-half to H. C. Hooker, Syracuse, N. Y.

295,466.—Cutting tool—J. B. Wallace, Chicago, Ill.

295,173.—Lath sawing machine—W, E. Hill, Kalamazoo, Mich.

295,284.—Lumber drier—L. Rollins, Mountain Creek, assignor to himselt and O. Stolker, Montgomery, Ala.

295,418.—Lumber drying apparatus—A. S. Nichols, Pullman, Ill.

295,191.—Match splint machine—G. H. Millen, & E. Mousseau, Hull, Quebec, Canada.

295,162.—Mortising machine—W. W. Green, Chicago, Ill.

295,236.—Mortising machine, boring attachment—W. H. Doane, & G. W. Bugbee, Cincinnati, Ohio.

295,316.—Plane attachment rabbet—C. A. Warfield, Philadelphia, Pa.

295,414.—Plane bench—C. A. Meekins, New Haven, Conn.

295,385.—Saw—W. H. Hankin, jr.,Brooklyn, N. Y.

295,303.—Saw mill—J. M. Story, Spring City, Tenn.

295,170.—Tenon extractor—O. Hendrick, Macon, Miss.

295,354.—Vice—W. H. Cloud, Detroit, Mich.

Encouragement of Small Manufacturers.

The New London, Conn., *Day* says that there has been a decided recent growth of manufacturing in that place, and in discusing the subject has the following suggestion: "These interests can be further stimulated and developed by the erection of a building in which room with power can be furnished to manufactures of limited capital who are unable to buy land and build for themselves. In every city whose manufacturing interests are of importance such buildings are to be found. They are hives of industry and paying investments to the men who own them. Many establishments throughout the country which have grown to importance have been started by men who in the beginning did not have the capital to furnish their own power, and many of the most prosperous manufacturing enterprises, on a small scale, to be sure, but yet substantial and yielding large returns on the money invested, are those which occupy leased premises and hire their power." It is added that the late Richard D. Chapel had proposed to erect such a building, ond that, as a shrewd and experienced business man, his taking up the subject was a very valuable indorsement of the soundness of the views just expressed.

The Norway-British Lumber Trade.

The *Timber Trades Journal* says :—The table of Norway exports of timber for 1883, furnishes still further evidence of the importance of British trade in that industrious and thriving nation. In 1882 the trade of the United Kingdom with Norway in wood was, compared with that of all other countries together, as 546 is to 362; but in 1883 the disproportion was still greater, being as 608 to 337. Whether we needed all this immense quantity, while other timber shipping countries were also pressing their produce on our markets is another question; but any way we got it. Nor do the published figures tell the whole truth as to the quantity, as the statement only comprises the register tonnage of the ships employed to carry it away, and to that we may add at least one-third more, which would make instead of 608,000 tons for last year's supply from Norway, over 800,000 loads, and about 450,000 to the rest of the world.

The Rathbun Company.

In the New York Assembly a bill was passed authorizing the Rathbun Lumber Company, a Canadian corporation, to do business in the state. In the Senate a bill was reported from the Assembly allowing the Ogdensburg & Lake Champlain Railway to own propellers on the lakes, and was referred to the Canal Committee.

Lumberman's Convention.

On April 11th, a lumberman's convention will be held at Vicksburg, Miss. Excursion rates over the illinois Central Railroad will be furnished to all who wish to attend. For full information as to time of starting, rates, sleeping cars, etc., address J. F. Merry, passenger agent, Menchester, Iowa.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain and cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup for children teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentery and diarrhoea, regulates the stomach and bowels, cures wind, colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system, Mrs. Winslow's Soothing Syrup for children teething is pleasant to the taste, and is the perscription of one of the oldest and best female nurses and physicians in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

FOR ALL AGES.—The aged, debilitated and infirm will find renewed vigor and strength by taking Burdock Blood Bitters. The young hastening to early decay will also find in this revitalizing tonic a remedy worth trying.

FACT STRANGER THAN FICTION.—It is a fact that Alonzo Howe, of Tweed, had a fever sore than afflicted him for thirty-five years. Six bottles of Burdock Blood Bitters cured him, which he considers almost a miracle. It was but the natural result of the remedy restoring pure blood and perfect secretion,

A FAVORITE EVERYWHERE.—Wherever introduced Hagyard's Yellow Oilfinds friends. It is the old reliable household remedy for external and internal use in all aches, pains, lameness and soreness of the flesh. A. L. Geen, a prominent druggist ofBelleville, says: "It is a great favorite here, and has a good sale.'

A PRIZE. Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All, of either sex, from first hour. The broad road to fortune opens before the workers, absolutely sure. Address TRUE & Co, Augusta, Maine

LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on Mar. 1st, 1883 and 1884, and also the Consumption for the month of Feb. 1883 and 1884 :—

	Stock, Mar. 1st. 1883.	Stock, Mar. 1st. 1884.	Consumption for the month of Feb., 1883.	Consumption for the month of Feb., 1884.
Quebec Square Pine	191,000 ft.	399,000 ft.	135,000 ft.	58,000 ft.
" Waney Board	177,000 "	328,000 "		
St. John Pine	8,000 "	33,000 "	00,000 "	2,000 "
Other Ports Pine	46,000 "	77,000 "	1,000 "	6,000 "
Red Pine	56,000 "	50,000 "	2,000 "	2,000 "
Pitch Pine, hewn	541,000 "	286,000 "	83,000 "	96,000 "
" Sawn	440,000 "	540,000 "	121,000 "	130,000 "
Planks	62,000 "	54,000 "	23,000 "	20,000 "
Dantzic, &c., Fir	34,000 "	117,000 "	16,000 "	10,000 "
Sweden and Norway Fir	21,000 "	120,000 "	00,000 "	6,000
Oak, Canadian and American	230,000 "	293,000 "	74,000 "	43,000 "
" Planks	131,000 "	183,000 "	28,000 "	82,000 "
" Baltic	25,000 "	13,000 "	9,000 "	0,000 "
Elm	35,000 "	13,000 "	8,000 "	1,000 "
Ash	4,000 "	28,000 "	5,000 "	0,000 "
Birch	54,000 "	80,000 "	14,000 "	20,000 "
East India Teak	66,000 "	70,000 "	0,000 "	22,000 "
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Quebec Pine & Spruce Deals	7,279 "	8,054 "	756 "	769 "
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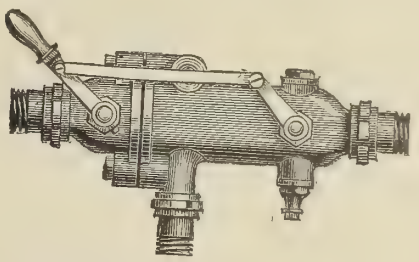
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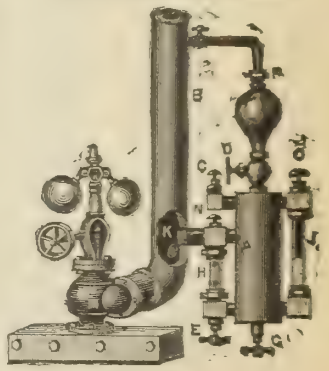
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DECAYING OF HEAVY TIMBER.

It has been proven beyond all chance of contradiction that one of the principal reasons of machinery becoming hard to move so soon after being put in, is the decaying of heavy timbers, both beneath the engines and the sills, causing the shafting, pulleys, drive-wheels, etc., getting out of true, giving rise to unnecessary friction. A journal, devoted exclusively to building and architecture, has offered some suggestions, that, being to the point, we insert them here. It says:—

"The best support for heavy machinery where a substantial foundation is essential, is made of timber six or eight inches square, laid on a solid foundation at distances from each other convenient to bolt the machinery directly into the timbers. The space between the timbers is to be filled with small stones, well rammed and covered with asphalt concrete, finished smooth to the level of the tops of these timbers. It must be painted to keep the asphalt from being softened by oil from the machinery. The asphalt preserves the wood from decay, is a poor conductor of heat, is agreeable to stand upon, and is water-proof. Cement should never be used in the place of asphaltum concrete, as the timber will decay very quickly. As in all damp places, it is desirable to use timber treated with some of the antiseptic processes."

Admitting, as all will, these suggestions to be good ones, let us examine and see if some antiseptic property or process cannot be determined, that will not only be cheap, but pre eminently practicable.

By referring to a previous article in this department, it will be seen in the discussion of "wastes," that mention is made of the volatile properties of wood when subjected to destructive distillation. Now these very products are what the writer of the article above quoted alluded to in speaking of treating with some of the antiseptic processes. These volatile properties of which we speak are essentially crude creosote. For any wood, we care little, if any, what kind of wood, if only dry, thoroughly impregnated with this, will last one thousand years,—ay, more than this, for we have seen samples of wood treated in this way by the prehistoric inhabitants of this country, and the evidences of decay were not yet visible, but for countless ages, almost, it has been buried beneath the rocks, water, sand, and othe debris, subjected to all the decomposing influences common to the section where we obtained it (c a), and still it remains sound and perfect in nearly every respect.

Again, as a precautionary measure against fire, wood thus impregnated, is recognized by nearly all insurance companies as less liable to burn, and in some sections risks are taken at much lower rates, than when the wood is used in its natural state.

Near the line of the Empire State, in New Jersey, an establishment for impregnating piles and heavy timbers was recently burned, when it was demonstrated to the satisfaction of all beholders, that creosoting the wood afforded considerable protection against fire. The building proper was of pine and spruce in their natural state, and of course, having been subjected for years to the heat of the atmosphere without and the furnace within, this wood was dry as dry could be. The main sills, to preserve them from decay, were creosoted, and made of gummy pine, from Pennsylvania. These were set on posts and raised about a foot from the ground, so the flames and accumulated embers from the burning building had ample opportunity to do their work of burning under the most favorable circumstances. After the fire had exhausted itself for lack of material or food, everything was in ashes save these sills, which, though thoroughly charred, still retained their shape, and no little strength, while not a piece of timber untreated, could be found as large as the hand.

About the premises were numerous piles and other lumber, laying in piles which had been treated, were found unconsumed, while the cross-pieces placed between the layers to admit drying were entirely consumed, not a vestage remaining. In large timbers, where the creosote had not permeated through the centre, the flames burned through them lengthwise, leaving a shell; the creosoted wood went out of itself, leaving things as we found them. It burned, as far as it went, with a dense black smoke which no doubt had a smothering effect.

Again, wood that has been thus treated can withstand the action of water equally as well; placed in positions exposed to the constant action of water it will neither swell or increase in weight. Neither will it furnish sustenance for any of the creeping vines, ivies, etc.; and it has been said—but we have no means of testing it—that the bottom planks of ships impregnated with this substance is proof against the barnacles.

That timber treated will not swell or increase in weight we know to be true, as we gave this a very severe test. For use in the laboratory we have a variety of scales, and one set, peculiarly sensitive, in fact the faintest lead-pencil mark will turn them, and on these we weighed a bit of thoroughly dried and seasoned basswood; a vessel containing the creosote at the proper temperature and in the right condition was now weighed, and the wood placed in it. After being thoroughly soaked the wood was removed and the dish and contents again weighed. Thus we have the actual weight of the wood and the creosote absorbed; these being determined, the wood was first placed in water, soaked and weighed; result, same weight as before; the water again received the wood, was boiled one hour; result, the same; again the water was acidulated, still it refused to increase in weight, and the more we treated it the harder it seemed to get water into it. The sample was now allowed to dry, and its size accurately determiaed by sinking it into a hydrometer jar, carefully and accurately graduated, and filled with distilled water. The cube was now taken out and treated to all the processes as before and then sunk in the water, when it was found to display precisely the same number of cubic centimetres as before; hence had not increased in size.—*Lumber Trade Journal.*

LONGEVITY OF TREES.

It is stated by competent men, that the great age of the mammoth trees of California is not so very phenomenal, as other trees on the Pacific coast also exhibit great ages. In order to ascertain whether the great trees formed more than one ring in a year, Mr. Meehan, of Philadelphia, has tested the matter in various ways. For instance, pine or spruce is found to make an average growth of one foot a year up to fifteen years old; from that to about 30 years, nine inches; from that on six inches; after that a stage is met where the erect growth ceases to any considerable extent, and the growth force seems turned toward the lateral branches. In the pine forests of the Pacific coast, there is no possible danger of fixing the age of the average tree of sixty feet high, at about fifty years. Whenever such a tree is cut down, and the annual rings are counted, they are found to correspond so nearly with the calculated age, as to prove that it is quite safe to assume a single circle for a single year. There is a remarkable degree of uniformity in the diameter of these annual growths in most trees, so that when we once have the number of rings to an inch, and the diameter of the tree, we can tell the age near enough for general purposes. In some pines, growing on very rich soil, four circles only have been found to the inch. No matter how vigorous the growth of trees may be under fifty or one hundred years, decrease it with age, and we may safely allow six rings to an inch in the older sugar pines of California, which will make a tree of 33 feet girth about 400 years old. At Harrisburg, or Juneau, in 58 deg. north latitude, a sitka spruce, *Abies Sitkensus*, cut down, gave 149 rings from centre to circumference, 298 lines in a trunk three feet across. This is an average of about eight to an inch in this tree on the supposition that it was 149 years old. At Wrangel, lat. 56° 30′, a tree of the western hemlock, *Abies Mertensiana*, which had been blown down, and afterwards divided by a crosscut saw at four feet from the base, gave 18 lines to the inch, and the annual growth seemed very regular almost to the centre of the tree. It was six feet in diameter, and must have been a grand old tree in its day. It had evidently been broken off before it was blown down, but the length of the trunk up to where it had been broken was 132 feet, and four feet in diameter at that height. Allowing twelve lines average to an inch of diameter, it indicates an age of 432 years. There cannot be any doubt that these trees in the latitude of Alaska will attain a life of 500 years.

Turning now to the Atlantic States, we find 200 years is the full average term of life for its forest trees, with the exception perhaps of the plane tree, *Platanus Occidentalis*, which is the longest lived of all. Trees famous for longevity in Europe are comparatively short lived in the United States. In an old garden near Philadelphia, where the trees can be a little more than 150 years old, nearly all are past their best. The English oak, which in England is said to live for a thousand years, has grown to full size and wholly died away in this garden, and foreign spruces are on the down grade. The great cypress has also begun to show signs of deterioration. Silver firs, planted in the vicinity of Philadelphia in 1800, are decaying, This is the general experience.

In seeking for the causes of this difference, we are accustomed to look at the relative humidity of the atmospheres of Great Britain and the Atlantic States. Evergreens, which will endure a temperature of 25 deg. below the freezing point in Great Britain, are killed by 10 degs. in Philadelphia; and it is believed that it is done by the dryer atmosphere causing a heavier drain for moisture on the vital powers of the plant, than it is able to supply. A strain which wholly destroys plants in some instances, must have a deleterious influence where it does not act quite so forcibly, and this would naturally be exhibited in shortening the life of the tree.

The climate of Alaska has abont the same favoring influences as Great Britain. The warm sea of Japan flows against its southeastern face, along which the trees first mentioned were found. The atmosphere is always moist, and severe weather is almost unknown. At Sitka, in lat. 57 deg., as much as 100 inches of rain has fallen in a single year. The harbor is rarely frozen, boats can go and come at all seasons of the year, and in some winters, no ice of any consequence is found. These are all conditions favorable to longevity in trees.—*Buffalo Lumber World.*

AN ENGLISH IDEA.

The St. James *Gazette* remarks:—The forests of the United States have been so mercilessly stripped of trees that a wood famine is almost inevitable in a few years. But an end is coming to that reckless method of procedure, and the lumbermen themselves are beginning to see that "something" must be done. That something can, of course, only be planting on a large scale. Happily, there is little fear of similar dearth in Great Britain; none, at any rate until the great landlords are reformed out of existence. For almost the sole reason that England and Scotland are so thickly wooded is the perserverance of the landed class in tree planting. One family alone, that of the Dukes of Athole, has in a hundred years planted scores of millions of trees. The "landed duke," who commenced operations in 1774, planted 27,000,000 trees, covering 15,000 acres, principally the Dunkeld hills and in their neighborhood. The present Duke of Athol plants from 600,000 to 2,000,000 trees every year. The terrible storm which destroyed the Tay bridge blew down 80,000 of the Duke's trees, but the loss was hardly noticeable.

A Variety of Woods.

The *Northwestern Lumberman* has repeatedly noticed the increase in the use of a variety of woods—especially hardwoods—in house finishing in the larger towns and cities. A Minneapolis venture calls the subject to mind again, and emphasises what has been asserted. Mr. R. B. Squires, of Squires & Thompson, lumber dealers of Minneapolis, recently returned from a trip through Texas, Louisiana, Mississippi, Alabama, Tennessee and Arkansas, and after having made a thorough inspection of the woods of those states, contracted for shipments of walnut, cherry, sycamore, gum, red cedar, curly pine, yellow pine flooring, etc., which will be kept on sale for interior house finishing or such other purposes as these woods may be required for. This incident is worthy of mention as showing that modern house building demands a variety of woods, and they will be had even from almost any distance. It is significant of the importance southern hardwoods are acquiring when they are carried all the way from the Gulf States to Minnesota for use. The incident is also significant of the growing wealth and elegance of Minneapolis, as well as of the enterprise and energy of the firm that has made this new departure in the lumber business.

The Weather and the Timber Trade in England.

The *Timber Trades Journal* of a late issue says:—Perhaps one of the most remarkable features which have characterized the present winter, and by which it will be long remembered, is the extrarordinary succession of strong gales of wind. Hardly has one destructive storm swept across the country before another has been close behind to increase still further the devastation so painfully apparent in every direction. The effect of all these destructive winds upon the timber trade can hardly fail to make itself felt before long. We had occasion to refer to this matter in our last report, and its probable influence upon current prices of certain classes of wood. However, within the last three weeks the quantity of blown timber has been extensively augmented and consequently, under these circumstances, we certainly see but little prospect, if any, of improved quotations yet awhile; the tendency is rather in an opposite direction.

Larches in particular, but beeches as well, have suffered very much in these winds, and already there are signs of great quantities coming forward from various parts.

A Whistle Heard 13 Miles.

The Chesapeake and Ohio Railroad have decided to put upon their passenger engines steamboat whistles. At present six engines are thus supplied, and soon all of the passenger engines will have them. They will be very convenient, both to the public and employes of the road, as indicating on the approach of a train whether it is passenger or freight.

The Staunton *Vindicator*, in commenting on this innovation in railroading, says that the whistle can be heard at a great distance. A brakeman on one of the night trains coming to Staunton from the West the other night, says when he got home his wife told him she had heard the whistle at a distance in the still night air, had got up, made a fire, and cooked his supper by the time her husband reached home. It turned out that the whistle she had heard had been blown at North Mountain, about 13 miles distant.

Second Growth Tamber.

A man who buys wood for one of the principal railroads in Maine asserts that wood is growing faster in that state than it is being cut. As logging is still active in Maine, this is a surprising statement, but it is not so incredible as it seems at first thought. Most of the best forests in Maine have been cut down, but only a comparatively small part of the land it covered has been cleared. It may easily be true that the territory devastated by the lumberman during twenty years is now being covered with second growth timber. In other words it may be that while a heavy growth is being cut on one acre a lighter forest is springing up on twenty.—*London Free Press.*

A Poetical View.

Writing to the Cincinnati tree planters Dr. Oliver Wendell Holmes has said:—"I have written many verses, but the best poems I have produced are the trees I have planted on the hillside which overlooked the broad meadows, scolloped and rounded at their edges by loops of the sinuous Housatonic. Nature find rhymes for them in the recurring measures of the seasons. Winter strips them of their ornaments and gives them, as it were, in prose translation, and summer reclothes them in all the splendid phrases of their leafy language. What are these pines and firs and spruces but holy hymns, too solemn for the many-hued raiment of their gay deciduous neighbors."

Russian Forests.

The constantly increasing destruction of Russian forests is naturally discussed with much interest by Russian papers. The *Pall Mall Gazette* says:—"In the last hundred years the forest area of Russia has diminished from 11 per cent. in Twer to 45 per cent. in Riazan. The beautiful oak forests are becoming extinct. Of the celebrated chestnut woods of Vassilsursk, which date from the time of Peter the Great, only the borders exist at present, while all the interior is ravaged. The extensive forests on banks of the Volga and the Don, which once reached far into the steppes towards the Ural Mountain, are now destroyed, and so many million of trees have been felled in the interior of Russia that wood is becoming scarce in many of the provinces. The destruction is carried on very systematically; but before long it will of needs come to an end if the enormous consumption of firewood is not energetically stopped."

Pacific Coast Forests.

The forestry association of the Pacific coast, under the competent guidance of Prof. Sargent, is devoting its attention to the preservation of the beautiful forests of the Pacific coast range: Especially the redwood forests of California are said to undergo a fearful devastation by careless lumbermen, who utilize less than half of the trunks cut, besides the damage done by such indiscriminate cutting to the younger growth of trees. Very often districts are fired after the very best timber has been removed and thus additional damage is done to neighboring woods. Such wholesale destruction will eventually harm the lumbering interests far more than the small additional gain of the present can compensate for, and it seems that this fact is only too often ignored by those who are supposed to know better,—*Buffalo Lumber World.*

A Famous Parisian Tree.

The most famous tree in Paris is about to disappear, if it has not gone by this time; namely, the Fevrier or Gleditschia of the National Library. It is believed to have been planted as a tree of liberty in 1789, and was the gift of the English botanist, Catesby. In 1859, on the erection of the new reading-room, it had to be removed fifty yards, to the court of the library,—a difficult task for it was sixty feet high,—and the expense came to sixteen hundred dollars. The court, after the enlargement of the library, is about to be paved; and the tree is to felled.

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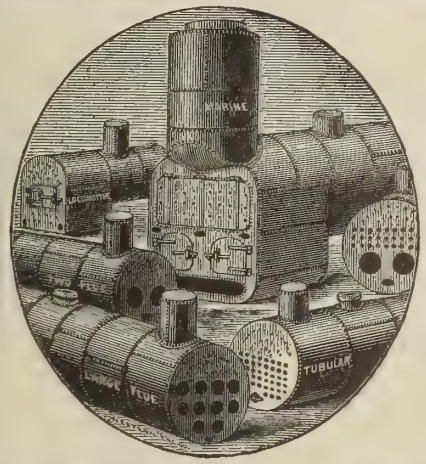
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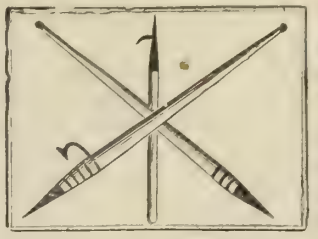


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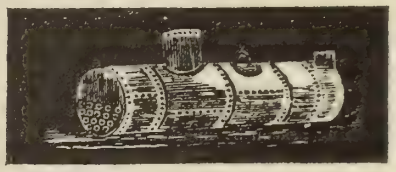
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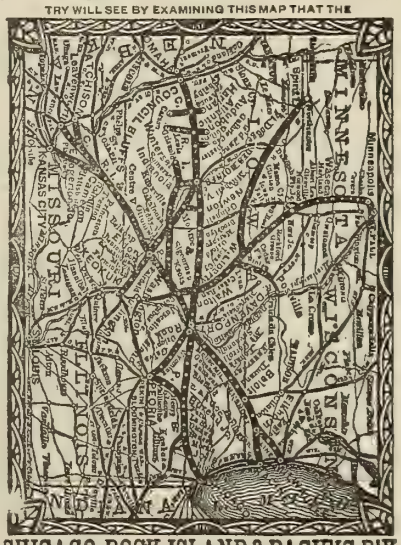


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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DRACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., APRIL 1, 1884.

THE United States sent 45,000 doors to New Sonth Wales last year, valued at $100,000.

ALL mahogany darkens in color on exposure to the atmosphere, but it is a favorite trick to stain the lighter varieties with an alkaline wash, in order to give them a darker tone.

THE January shipments of lumber from Chicago for the month of January were 67,007,509 feet. The same month of 1883 showed 64,695,600 feet. The entire shipments of lumber for the year 1883 were 1,906,592,356 feet; shingles, 1,028,974,854.

WE have received the first number of the *Builder and Manufacturers Journal*, published at Pittsburgh, Pennsylvania. To judge from this commencement it will be of great interest and service to those engaged in the building trade and allied industries.

J. C. LIKEN & Co., of Sebewaing, have been doing an immense business in cedar and other timber during the past winter. Besides 2,500,000 feet of pine logs, they have purchased 10,500 cords of elm and basswood bolts, 400 cords of cedar posts and 2,000 telegraph poles. These purchases embrace an outlay of at least $75,000 in connection with their cordwood. One such firm imparts life, and business activity and prosperity to any community.

Cotton, Wool and Iron of March 15th, thus reports the Boston market:—General trade has not started up very much yet, but it is near the time when an improvement may be confidently anticipated. Eastern lumber has not begun to come forward much yet. More spruce is arriving by cars on orders, and the northern mills are reported to be fairly busy. Laths and shingles are quiet. Southern pine is dull, and timber is particularly low. Flooring sells in small lots at fair prices. Western hardwoods are selling well, with light arrivals. Cherry, walnut and poplar of the best grades find a good market. Quartered oak and sycamore are also in good request. Western pine moves moderately, with particular call for wide finish boards.

DR. GRAY'S, "Field, Forest, and Garden Botany," one of our standard botanical text books, contains the following rather amusing item: Lunaria; Common Honesty or Satinflower. Lunaria biennis; Common Honesty. Not native to the country, but cultivated in old-fashioned places. Lunaria redivia; Perennial Honesty, is a much rarer sort, seldom met here. Of course Dr. Gray did not think when he wrote the book about 20 years ago, that these remarks had any special point.

SEVERAL kinds of hardwood lumber are gradually coming into use, which a few years ago were unnoticed. Beech is one of them. It is cheap and abundant, while the more poplar hardwoods are becoming comparatively scarce and consequently high-priced. Beech has a fine grain, is quite durable, and is used in the manufacture of school and church furniture, chairs, and to a certain extent in furniture. The red variety has a handsome appearance, and can be made to imitate cherry.

THE International Tent and Awning Co., of Ottawa, whose advertisement appears in this issue, have lately begun to make an ingenious and useful article in the shape of a canvass canoe, which can, without trouble, be folded into small compass. They are cheap and serviceable and likely to be much used during the coming season by sportsmen, tourists, lumbermen and others. This company last year carried off five medals and twenty-six first prizes at the exhibitions held at Toronto, Halifax, and St. John, N. B. These were awarded for the excellence and completness of their camping outfits, tents, flags, ends, tables and general supplies for camps. They have just issued an attractive illustrated catalogue which is well worth sending for and may be had free.

PONTYPOOL.

From Our Own Correspondent.

SAW MILL BURNED.—Mr. Ashby's steam saw mill was totally destroyed by fire on Monday evening. The fire broke out some time after the men had ceased work and it is supposed to have originated at the furnace. There was some insurance, but not enough to cover the loss. Most of the lumber was saved by the exertions of the employees and of the neighbors. Mr. Andrew Douglas was severely burned on the hands and arms while assisting to save property.

OTTAWA.

From our own Correspondent.

Mr. White, Renfrew, on Wednesday, March 12th, in the House of Commons, in moving for correspondence respecting an exhibit of Canadian woods in the Forestry Exhibition to be held in the city of Edinburgh, in August next, briefly referred to the desirability of having as favorable an exhibit as possible made by Canada. In referring to the vast extent of this industry he stated that during the past sixteen years the exports of the products of the forest amounted to $352,853,118, or an average of 35% of the total products of the country, exported within that period. It must be admitted, he said, that this industry was of sufficient importance to justify the Government in giving it that degree of prominence, in the old country, which it deserved. It had been stated that the lumbering industry was waning, but this was not the fact, as the exports for the past year amounted to $25,370,726, as against an average annual export for the past sixteen years of $22,220,069. If it was a waning industry, it was for the reason that the products of the forest were being ruined by fire. It was, therefore, desirable that the Government should obtain all the information possible by ascertaining the different methods adopted in the older countries to preserve the forests. He knew of no means by which this result could be better accomplished than by participating in this exhibition. The importance of the subject was one that should commend itself to the House. He hoped the Government would consider whether it would not be in the interest of the country to have the exhibit, if any there is to be made, under the author and auspices of the Federal Government.

Sir JOHN MACDONALD said that as soon as the Government had received a formal invitation to make an exhibit the Provincial authorities were notified of the fact. The subject came properly within the jurisdiction of the Provinces. A number of answers had been received and these would be brought down. After hearing the views of the members the Government could arrive at some decision.

Mr. COCKBURN took occasion to remark that as walnut was fast becoming extinct in this country it was a satisfaction to know that a splendid substitute, black birch, was to be found in the northern portions of Ontario, from Lake Huron to Georgian Bay.

Mr. FISHER offered some valuable suggestions and reasons why Canada should be represented at the coming exhibition. Besides the benefit to be derived from a display of the products of our forests, a great deal of knowledge of the deeper science of forestry would be obtained. He had in his possession some information concerning the exhibition, and he percieved that the science of tree planting, which, by the way, was attracting great attention in the North-West, should be specially considered. He suggested that a commissioner should be sent to the exhibition at any rate and the report from this official should be published. It would be a matter for regret if an inferior exhibit should be made.

The debate was adjourned.

THE SHRINKAGE OF WOOD.

There is but very little material that keeps the same size under all circumstances, says E. H. Davies, in the *Architect and Building News*. Metals shrink and expand—some very much more than others—according to change of temperature. Like metals, different woods vary much in shrinkage. But all woods of the same variety will shrink in size, in proportion to the amount of water or sap contained in the wood. One variety of wood may contain four times the quantity of sap and still not shrink near as much as others. Lumber sawed from trees growing on a side hill, or near the water, or on the south side of a grove, will shrink very irregularly. Some parts will shrink very much more than others, more particularly endways. The same is true with a tree that grows very much out of perpendicular. Suppose a tall tree was growing at an angle of 45 deg., the tree itself being perfectly straight, as soon as the tree was cut down it would partially assume the shape of a rainbow. Nearly all lumber shrinks more or less endways. Some lumber will shrink on one side and expand on the other as soon as it is sawed. This is very noticeable in sawing lumber from logs. For instance, the first board sawed from a log may be longer than the log, or *vice versa*, according to which side the sawing was commenced. It is also very noticeable in ripping up lumber; sometimes, when the saw gets well into the board, it begins to pinch and has to be wedged, but after the saw gets nearly through the cut, begins to open. It is doubtful if there is any lumber known that shrinks as much endways as redwood. That wood shrinks on an average ¼ of an inch in 12 feet; but there are cases when it is four times that amount.

A PRIMEVAL FOREST.

Not many years since the chief enterprise that engaged the thoughts and skill of pioneers in Chautauqua county consisted in efforts to remove the dense wilderness of oak, pine, hickory, hemlock, maple, chestnut, beech and other native trees of magnificent proportions and of native growth. The time was when an acre of cleared, cultivated land was far more valuable here than an acre of soil covered with dense timber. In Niagara county, less than 50 years ago, we saw immense log heaps of choicest black walnut all ablaze only to clear the land. This wood had not yet come into fashion with mahogany. In our strolls through this county and Cattaraugus we are surprised after an absence of many years, at the diminution of timber, the best having found its way into foreign and home markets. In Chautauqua county we have seen but one virgin forest of note of late years in our rambles. We refer to the well-known "Prendergast woods," said to contain over five hundred acres, solid with native trees never yet cut among. A ramble through this wilderness reminds us of the olden time. How it has escaped, or possibly could escape, the observation and grasp of the modern timber merchant, surpasses comprehension. An expert assures us that this unique forest, standing as nature planted it, consists, at a moderate estimate, of nearly nine thousand native oaks, monarchs of the woods, and about seven thousand lofty, original pines, among which are nearly eight hundred hemlocks, as this virtuoso in forestry enumerates the same. Of hickory, beech and maple he does not mention the quantity. This forest stands halfway between Jamestown, in this state, and Warren, in Pennsylvania, about seven miles from Jamestown and ten miles from Warren. It is situated within half a mile of Conewango, a stream which has floated the best timber in this region to Pittsburgh during a generation, leaving us now nearly without "clear stuff" for house building and manufactures. If some capitalist could or would induce the aged owner of this forest, who has no direct heirs, to sell, and if the native oak and pine and hemlock were cut, the second growth would be a fortune to the heirs of any purchaser. We should exceedingly dislike to see this last genuine wilderness dismantled and turned into "clearings," and then into holdings, to subserve the interests of the "almighty dollar," as I fear may be done in the not distant future. In England, for every tree slaughtered three young trees are planted, by law, to supply the waste; but in the United States we leave posterity to take care of itself, perhaps consoling ourselves by asking, What has posterity done for us? I have omitted to say that this to me sacred forest stands within a half mile of the Dunkirk, Allegheny & Pittsburgh railroad, to my view a dangerous proximity.—*Chautauqua, in Lumberman's Gazette.*

ELECTRIC LIGHTING FOR MILLS.

One of the great drawbacks to successful running of saw mills, during the night time, has always been the almost absolute impossibility of securing a sufficient and reliable light for successfully operating the machinery, without endangering it as well as the lives of the operatives. This obstacle has at last been overcome, and electric lighting of mills is now possible without the use of the high speed engines heretofore necessary.

It is a fact well known to experts and others who use the electric incandescent light that the generator requires to run at very high and nearly uniform velocity. The "approximate" of revolution has heretofore been accomplished by the use of very high speed reciprocating engines to overcome the check that the crank of the engine receives at each end of the piston stro and which check produces the ticker to th candeacent electric light.

To overcome this trouble a class of e ines made by only three or four manufacturers in the United States has come into use. These engines are especially intended for transmitting uniform motion to the generators of dynamo machines, and they are very expensive, both to first cost and subsequent maintenance, as they require an expert and superior machine to keep them in good running order. To this may be added the fact that very large engines cannot be run at very high speed, so that an engine of sufficient capacity to light a big section of the city cannot be used for this purpose. All the efforts heretofore made in that line have been by the employment of a number of small engines to furnish the requisite power, as not more than two dynamos can be driven as at present used, by one engine, It will thus be seen that great expense and complication stand in the way of using the electric light in a central system. To obviate these difficulties a device has been invented by J. B. Markle and J. B. Wayne, of Detroit, and a test plant of fifty lights has been in operation during the winter, which utilizes a slow-running engine in connection with the patented device for giving the uniform motion that is absolutely necessary to the generator of a dynamo machine, and produces a light of great steadiness and brilliancy.

This device consists in using a counter shaft on which are a fly wheel and small friction wheel driven by a larger friction wheel on the engine shaft. A very rapid motion is com-

municated to the counter shaft, which, being in connection with the running engine shaft by means of the friction shaft above mentioned, is used to control the motion of the crank and thus prevent checking at each end of the piston travel. The result is a steady round motion, communicated to a slow moving engine, a disideratum never before achieved for this purpose.—*Lumberman's Gazette.*

LUMBERING IN THE FAR WEST.

The Winnipeg *Free Press* has the following from Edmonton :—

The lumbering operations of this winter are decidedly in advance of any previous year. There are four firms engaged in the business of getting out saw logs. The Lamoureaux Bros. are at work near the mouth of Dup Creek, below Fort Saskatchewan. The Roman Catholic Mission is operating on the Sturgeon River, and the Hudson Bay Co. and Hardisty & Fraser are working beside one another at the mouth of the White Mud river, about 45 miles up the Sakatchewan. The two first mentioned companies are getting out respectable quantities of logs, but the greatest amount of work is being done by the last two. They both laid their plans for beginning early in the fall, but they were delayed for some time by the difficulty of getting permits from Ottawa to cut timber. Both firms applied over two years ago for timber limits but they have failed to get them, and they are forced to be content with an annual license to cut. The Government maxim being apparently—"no mill owners need apply"—at least until friends of the Government have had all they want.

The two firms are working this winter in the same block of timber, and their camps are within a few yards of each other. The situation is a romantic and wild-looking one on the river flat at the foot of a steep spruce clad hill. A never-failing stream of spring water, which never freezes over, runs past the doors. There are some 50 men and 15 teams employed in cutting the logs and getting them to the river bank. The outputs thus far amount to 16,000 to 17,000 logs, which will yield about 100 feet of lumber each. In length the logs vary from 12 to 188 feet, with a few still longer, and very few of them are over two feet in diameter. The timber is of course spruce, but a few cotton wood or black poplar and birch logs are taken also. The quality of this year's cut is good, the logs being sound, of good size and comparatively free from knots.

PORT ARTHUR.

Mr. Squires, one of the leading merchants of Port Auther, and who is in the city at present, says that the opening of the C. P. R. under the company's own management created much activity in the town last summer. The railway company are building their docks and have one elevator almost ready for grain. Several other docks are under course of construction by private individuals. Extensive preparations have been made for the manufacture of brick, which last season had to be brought by vessel at much greater expense than they can be manufactured for on the spot.

Recent explorations have revealed the fact that there is plenty of white pine to be had within easy access of Port Arthur, and the construction of Marks' sawmill and the extensive works of the Algoma Lumber Company, besides other planing mills and shops, have supplied a much needed demand. Mr. Squires further says that, notwithstanding this is the dull season, there is not now a vacant house to be leased in the town, and the demand for houses and stores is greater than can at present be supplied. The opening of navigation and the great increase in all branches of business which will follow that and the recent extraordinary developments in the mines are almost certain to create a regular rush and genuine boom next summer.—*Winnipeg Times.*

ON THE CLYDE.

Singleton, Dunn & Co.'s timber circular dated Glasgow, 6th March, says :—

The tone of our market is very dull, and the prospect not encouraging. The absence of fresh contracts for ships—making that branch of industry look very unpromising—and the uneasy feeling caused by heavy failures in general business, have reflected on our trade, causing dealers to buy sparingly of spot goods, and to hesitate, and in most instances decline to enter engagements for f.o.b. business. We have, notwithstanding this state of matters, to report that from the ponds at Greenock and the deal yards here large deliveries have been made, in the latter case these deliveries exceeding those for the corresponding period of last year. These deliveries indicate a fair consumption, and it is known that some, indeed most, of the saw mills are fully employed. This consumption will soon tell on the stocks, and by and by, if moderation is exercised with consignments, some good should be done. In North of Europe wood goods business is in an identical position to what prevails in Canadian. So far few or no transactions in forward business is reported. Freights.—The ship owners are averse to accept merchants' terms, viz., from Quebec 21s. to 22s., and from Lower ports 55s. to 60s. ; still there are indication that all the tonnage wanted may be acquired at the figures named. From St. John, N. B., it is reported steamers are loading at 50s. to a direct port in U. K.

A Big Cut.

We hear that a chopper of the name of Harry Lebbee, in the employ of Mr. Robert Dunlop, of North Monaghan, cut eight and a quarter measured cords of black ash between six o'clock in the morning and six o'clock in the evening last Tuesday, with a Wetmore axe. Who can beat this for a day's work?

The Lumber Trade.

Mr. I. M. Weston, of Grand Rapids, Mich., in commenting on Congressman Houseman's opinion in favor of rescinding the duty on lumber imported from Canada, lately, gave it as his opinion :

"The only result of putting lumber on the free list would be to increase the value of Canadian stumpage. They have only a small quantity of pine within reach anyway—principally around Georgian Bay—and have to buy largely of us. I have manufactured lumber in Whitehall year after year and shipped it to Canada. I now have orders from New York parties to go to Canada and buy up large tracts of pine if lumber is placed on the free list. If lumber goes on the free list, Canadian stumpage will increase in value about $1 a thousand, and that is all there is of it.

Trade With Great Britain.

The *Monetary Times* says :—The quantity of timber and lumber imported into Great Britain and Ireland during the month of January last, was as under, compared with the same month of 1883 :

	Jan., 1884.	Jan., 1883.
Hewn loads.....	81,788	63,940
Sawn "	56,153	61,355
Total.....	$137,94	$125,295

Showing a decrease in import of sawn goods, and an increase in the total. The London market for timber is described by the *Timber Trades Journal* of the 16th ult., as "uncertain ;" that of Liverpool as "comparatively stagnant ;" at Hull and West Hartlepool matters are "extremely quiet" while in Glasgow the public sales are well attended, and Canadian deals are going off amid "spirited competion."

Lumbering at Roscommon.

The Bay City *Lumberman's Gazette* says :—The news comes from Roscommon county that operations in the lumber woods are about closed, and the contemplated cut of logs last fall has been very materially exceeded. Many jobbers had their contracts completed several weeks ago, but received orders from headquarters to push on the work as long as the weather was favorable, and have been doing so. This is but the reiteration of the news from many other points, and the pretended curtailment still being circulated by pretended lumber dealers, which should be better posted is nonsensical, as might be easily understood by the least consideration of the facts and circumstances. It is barely possible that there are individual cases in which the curtailment policy has been adhered to, but the percentage of such cases is unquestionably small.

A Sixteen Century Sawmill.

In the year 1555 the Bishop of Ely, being Ambassador from Princess Mary of England, to the Court of Rome, observed a saw mill in the neighborhood of Lyons. He describes it as being driven by an upright wheel, "and the water that makes it go is gathered whole in a narrow trough, which delivereth the same water to the wheel. This wheel hath a piece of timber put to the axletree end like the handle of a brooch and fastened to the end of the saw which, being turned with the force of water, hoisteth up and down the saw, that it continually eateth in, and the handle of the same is kept in a rigall of wood from swerving. Also the timber lieth as if it were upon a ladder, which is brought by little and little to the saw with another device." Such is the description given of a saw mill at that early date.

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WOOD PRESERVATION.

How to protect wood from decay, or how to increase its durability is one of those important questions which Americans must try to solve in the near future. Many experiments in this line have been made in Europe at various times; of course no one has as yet arrived at a final solution, but like all important discoveries, the economical preservation of wood is a resuult to be attained only by prolonged and repeated experiments, and not something to be discovered by chance. Strange to say, our practical Americans have so far given but little, if any attention to the subject, although the centres for the wood supply become more and more inaccessible and farther removed from cheap transportation facilities.

We can not and dare not close our eyes to the fact that at the present rate of consumption our forests will, after a limited number of years, be exhausted; the supply will diminish while the demand, on account of extended applications, will increase year after year. Although under favorable conditions one single acre of pine lands can yield 6,000 feet of timber, the annual sales amount to billions of feet, and some people who always look at the darkest side of the question have already prophesied that the supply of white pine in the United States will be exhausted in about eight years. Let this be true or not, the question of the preservation of wood cannot be ignored, and the sooner we become accustomed to rigid economy in the consumption of lumber, the better it will be for the interests of the country at large and to the lumbermen especially.

England, France and Germany have already exhibited a large amount of activity in regard to this problem; in Great Britain alone more than fifty patents for the preservation of woods have been issued during the present century. The consequence is stated to be that railway sleepers, bridge timbers, telegraph posts, etc., last more than twice as long abroad as in America. If such facts can be demonstrated by statistics, our practical men must soon direct their attention to this important industrial problem.

Preservation of wood by chemical means has been tried with success. Wood so prepared exposed to the same conditions with unprepared wood, has proven the superiority of the former. But as the number of chemical preservatives is large, it is difficult to decide their relative merits, as the manufacturers or patentees do not always care to give full particulars about the processes. A presevative which works splendidly with one kind of wood, may fail entirely with another; and a method which protects seasoned timber may be found useless when applied to green wood. And thus it comes to pass that we find the most contradictory statements with regard to different processes. One found it efficient in every respect, another who failed to experiment upon the same conditions, failed entirely with the same material.

If we want to obtain a practical value of a test, there are a number of factors to be considered; the general efficacy of each process; the kind of wood to be used and its condition; the expenses and the use to which the prepared wood is to be applied. The first two can be decided by tests everywhere; the question of expense will vary with the locality, given a better or poorer market for the necessary chemicals.

The question of use, however, opens up different considerations. One process may preserve wood for say twenty years: another, very much cheaper method, for ten years. If now we are building something very large or heavy, where the removal of timber at a later period will involve a large expenditure of time and money, the process which preserves the wood the longest time, will be the cheapest although its first cost is higher. For other structures, however, which owing to the amount of wear and tear to which they are subjected, will wear out in a shorter time than perhaps ten years, the second process will claim higher advantages. And this must be carefully consided before accepting or rejecting one method in preference to the other.

Wood decays after it has been cut by slow oxidation, by the attacks of small creatures which burrow into the sound timbers and thereby open passages for air and moisture, and by the growth of fungoid plants of the Bacillus family. Every one of these processes is largely influenced by the atmospheric conditions. When the place is perfectly dry, timber has been known to remain healthy for thousands of years, as testified in some of the Egyptian tombs; wood completely immersed in water acquires a similar longevity. The foundation piles of bridges built by the Romans across the Rhine in Germany, have recently been taken out and found sound and good. Decay sets in quickest where the wood is exposed to alternate wet and dry, added to changes in temperature. The moisture which has been absorbed between the fibres, freezes, and in its congealing, acts like a wedge which splits the wood, opening a new place for water and air to enter as soon as the wood has again dried under the rays of the sun.

In a general way all our preservation processes so far known can be divided into four great divisions. The first of these treats the surface only by an application of some kind of liquid which fills the pores of the wood and thereby renders them air-tight and the interior of the timber inaccessible to the atmosphere. The second class includes those where an application extends below the surface and effects the layers underneath, such as carbonizing by immersion in strong sulphuric acid or by charring in fire or by a lamp constructed for the purpose. This latter method is largely used in France for telegraph poles, where the outer layer of the wood is carbonized, while the layers underneath undergo a partial transformation and form preservative substances within the wood.

The third division includes all those methods by which the wood is impregnated with insoluble mineral matter and in this way protected. All these act upon the principle of double decomposition, two solutions, soluble as long as they remain separately, but insoluble in the moment they come in contact with each other. The wood is first charged with one, and then with the other, a process that fills the pores with and unsoluble substance.

The earliest mention of this sort we find in 1828. In 1837 the use of water-glass and hydrochloric acid was recommended. Burkes, in 1844, proposed water-glass and sulphate of iron; Feuchtwanger, at about the same time soluble glass and lime water. In 1846 the use of sulphate of copper and caustic baryta was suggested by Venzat. Among many others, Payne's process, announced in 1841, has perhaps been more thoroughly tested than any other; it consisted of sulphide of barium and sulphate of iron, but it, like the other processes of this class was found to be too costly and imperfect and the results obtained were not in proportion to the expenses involved. All these processes are now abandoned, but as they form a part of the history of wood preservation, their mention in this connection will be excused. The fourth and last class brings us finally to all the methods in vogue at the present day. They consist, in a general way, of the injection of an antiseptic into the wood; the various methods differ only in the choice of the antiseptic and its application.—*Buffalo Lumber World.*

CANADIAN LUMBER TRADE.

We take from the Toronto *Telegram* the following:

"The American Congressional Tariff Committee's decision to place Canadian lumber on the free list, has caused a ripple of excitement in local lumbering circles. In conversation with several city lumbermen a *Telegram* reporter was informed that the result of the change in the improbable event of its being sanctioned by the Senate, would be to give a much needed impetus to the Canadian lumber industry. Mr. R. A. Lyon, M. P. P., for Algoma, and an extensive lumber manufacturer at Micheal's Bay, Manitoulin Island, in answer to a query said:—"It would be the best thing that could happen to us Canadian lumbermen at the present time. The trade is now extremely dull; large stocks of lumber are awaiting shipment at the principal centres in the Dominion. Although the accommodation of lumber at Chicago is one million feet less than at this time last year, it is an undoubted fact that the lumbering industry is depressed. The abolition of an American tariff which is virtually prohibition on cheaper grades of lumber would give an outlet to the over-stocked Canadian market."

Mr. Riches, of S. C. Kanady & Co., remarked, "I believe that tariff will go. We will then be able to compete on the American market with the home producers. At present we are barred out by a duty of $2 per thousand all around. This tariff isn't burdensome in expensive lumber, but when you come to ship lumber at $8 per thousand it in effect closes us out from placing our lumber on the American market."

"The change will do more than anything I know of to relieve the present financial stringency in Canada," answered Mr. S. S. Mutton to the reporter's interrogation. "Why, you known," he continued, enthusiastically, "our lumber export trade almost equals our grain shipment. The lumber exports would be doubled by the change, and we would have a chance to deal with those men in Buffalo and elsewhere who give us big orders and always pay cash. Now, we are left in tendering on American orders on the cheaper grades by from 75 cents to $1.25. With the $2 duty off we could overcome this difficulty and still have a handsome profit. One result of the abolition would be to raise the price of lumber in Toronto by perhaps $1 a thousand. I, however, don't believe the change will be made. If passed in Congress the influence of the Stalwarts from the Maine pineries will force the Senate to kill the project."

Mr. Kerr, of Christie, Kerr & Co., was not extremely sanguine as to the effect of placing Canadian lumber on the free list. If the American market was in a flourishing state it might enliven the trade considerably. In view of the prevailing depression he thought the good effects would be limited to opening a market for the cheaper grades of lumber.

Mr. McCracken, of McCracken, Galt & Co., did not believe that the change would result in increasing the price of lumber in the loca market. It would largely increase the demand for cheap lumber, but in his opinion there was not the slightest probability of the Senate assenting to the abolition of the duty.

Mr. A. H. Campbell believed the change would benefit Canadian lumbermen in the unlikely event of it taking place.

CARE OF FORESTS.

The Agricultural Committee of the House of Commons of Canada met on Friday March 14th, and heard the evidence of Mr. Thayne of the parliamentary library, who said he had devoted a great many years to the study of forestry and had visited most of the finest forests of Europe. Forestry, he said, is intimately bound up with agriculture. The denudation of forest trees is a great injury to the agricultural interests of the country. In South France, for instance, whole districts have become depopulated, owing to the shepherds on the slopes of the Appenines having cut off the small growing trees for fuel and having left the surface soil exposed to rains, which washed it away. Other countries in Europe have suffered in the same way, and the damage done can only be repaired at immense cost. If we, in this country, said Mr. Thayne, destroy the vegetable barrier at the north, we expose ourselves to severe storms and cold. Forests have, it is well known, ameliorating influence upon the climate. They equalize the weather and preserve our lakes and running streams. As to forest planting in this country he thought it was not yet necessary; but every farmer in the country who had bare fields should plant trees, to break the winds of and afford shelter to his stock in summer. In many European countries the government has taken away some of the private rights over forests, and insists that they shall not be destroyed; and if a man thinks it advisable to cut down his forest wood, the whole of the neighbouring landholders must be consulted. In Canada no care is taken of the forests, and the government makes no provision whatever for maintaining the supply of wood. But in Europe the tendency to control the forests is every year stronger, and it is considered necessary that at last 25 per cent, of the land shall be covered with wood. In the older provinces of Canada the government should, in Mr. Thayne's opinion, set apart the timber lands to leased out in blocks, from which all the trees of a certain diameter might be cut down, and after this is done they should be left alone for a while, till the remaining trees became sufficiently large to be cut. Such care of forests would be an advantage in supplying employment in winter to men who would without them have had nothing to do here, and would afford timber for a continuous supply to meet the requirements of trade. Mr. Thyane said he favoured the the importation of foreign trees, on the same principle of culture which renders expedient a change of seed. A new species can be introduced to general advantage only by a government agency in which the public would have confidence. It would be absurd to compel persons who go to live on the great plains of the Northwest to plant so many acres of trees; for there are no nurseries from which to obtain plants and no protection against the fraud and carelessness of dealers residing hundreds of miles away. If proper nurseries were established by the government, so that new settlers could obtain young trees, and the information necessary to their successful cultivation, they would prove a great benfit. He favoured the establishment of a central bureau of agriculture as a source of information and encouragement for farmers all over the country. The race of life is now so keen that unless special measures be taken we shall lose in the competition with our neighbours and the rest of the world. The Federal Government looks after the interests of trade and commerce, and therefore, should not neglect the chief sources of trade and commerce that the country possesses. Upon agriculture and the care of our forests depends in a great measure the prosperity of our country, and the best known methods should be adopted for their promotion and care. Under central bureau these methods could be taken, and, by means of experimentation, new methods could, from time to time, be introduced and applied. There is, in Mr. Thayne's opinion, no reason why a central bureau and experimental stations should not be as beneficial in Canada as in other countries,

NOTES ABOUT A SAW.

The Germans use at the present day among their furniture makers, carpenters and joiners, thirteen different varieties of saws, each one of which has its own peculiar size of the teeth, as well as a different relation of the teeth to each other. How important the thin saw blade is, not only as as a means to save power, but also as a means to save wood, can be seen from the following:—A log of walnut, four meters long and one meter in diameter, cut into 20 pieces by the new horizontal saw frame saves thirty millemeters of wood when compared with the cutting of the old fashioned vertical saws. This is equal to a profit of from $9 to $12. For Germany, where annually 100,009 cubic meters of this wood is used in the various industries, this would represent a saving of $37,500 to $50,000.

The greatest enemies of saws are the particles and pieces of iron found in woods; these are often driven in some form into young trees and succeeding growth covers them up entirely. A curious collection of such ingrown iron particles was recently exhibited in Germany. It had been obtained from America, Prussia, Germany Spain and other countreis, and exhibited the queerest forms of wood formation covering particles of iron of various shapes and sizes, whose presence was revealed only by a breaking of the teeth of the saw, and which without the cutting would have remained invisible to the human eye.—*Buffalo Lumber World.*

A VESSEL OF IRISH OAK.

The *Timber Trades Journal* says:—We make the following short extract from the Dundalk *Examiner* of Saturday last, giving an account of the launch of a new vessel by the Dundalk Patent Slip and Shipbuilding Company. This young but enterprising company owes its inception to Mr. John Connick, and seems to grow rapidly in prosperity and vigor, says our contemporary. On Thursday last they launched their first new vessel, the Lake Patos.

A large company assembled, and no sooner had the custom of breaking the bottle of brandy

against her bow been complied with than the ship gracefully glided out. The Lake Patos is a three-masted schooner or barquentine, and is intended specially for the Brazilian trade, being of a peculiar although very symmetrical build. The vessel is made long and shallow, and takes a low draft of water in order to suit some of the shallow harbours of the South American empire. She is 102 ft. in length, 23 ft. in breadth, and 9 ft. in depth. She is registed at 107 tons, but will carry 220 tons. Built under special survey she is classed A 1 at Lloyd's for 12 years. The material used in her construction is all of the first quality, Irish oak and teakwood, her timbers being fastened with yellow metal bolts. The owner of the new schooner is Mr. William Larmour, of Liverpool, and her first voyage will be for Rio Grande at the mouth of Lake Patos, in South Brazil. She will sail from Dundalk to Cardiff when completed, and take on board a cargo.

NORTHWEST TIMBER.

We take the following from the annual official report of Department of the Interior:

"The satisfactory increase in the revenues of the Crown from the timber on Dominion lands, which was noted in last year's report, continues, being $216,785.83 for the twelve months ending the 31st October, 1883, or $108,004 in excess of the amount for the previous year. But what is even of greater consequence than revenue is the fact that, through the policy of offering timber berths at a comparatively limited original cost to those willing to comply with the regulations of the department in regard to the erection of mills, etc., in connection with each berth, and thus promoting a competition that could not have been produced had the system been followed of offering timber lands in unlimited areas to persons willing to pay the highest price for them, the pioneer settler is now enabled to procure the necessary lumber for his farm buildings, etc., at a cost of 40 per cent. on the average less than at any previous period since the acquisition by Canada of Manitoba and the Northwest Territories.

From data obtained by the Crown Timber Agent of the department at Winnipeg from the accounts of the sales of the principal lumbermen of that city, it is ascertained that the prices of the various classes of lumber at that point during each year from 1872 to 1884 were as follows:—

Year.	*Pine per M.*	*Spruce per M.*	*Poplar per M.*
1879	$28 66	$22 00	$.....
1880	27 33	23 00	28 00
1881	28 66	24 50	28 00
1882	28 33	26 50	28 00
1883	25 00	20 00	18 00
1884	21 00	15 25	

The foregoing statements show that at this date the price of lumber in the Winnipeg market is 40 per cent. less than in 1883; spruce lumber, over 30 per cent. less than in 1879; tamarac lumber, nearly 7 per cent. less than in 1879; oak lumber 12½ per cent. less than in 1872; and poplar, 55 per cent. cheaper than in 1872."

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., will send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N. B.—No risk is incurred, as thirty days' trial is allowed.

A DOUBLE BENEFIT.—James Moore, a prominent resident of Leamington, writes that he cured himself of Dyspepsia of a year's duration by one bottle of Burdock Blood Bitters, and two bottles cured his wife who had been for years a sufferer from the disease. He conscientiously recommends it to all suffering from similar troubles.

CRUSHED BY THE CARS.—A little son of John Spinks, Toronto, had his foot crushed by a G. T. R. Express train some time ago. Two doctors attended him without benefit, and amputation was proposed, but Hagyard's Yellow Oil was tried, which give prompt relief and effected a speedy cure, even removing all stiffness of the joint.

DANGER TRAPS.—Neglecting colds are the fatal traps that ensnare many a victim beyond possibility of rescue. Take a cold or cough in time and it is easily conquered by that safe and pleasant vegetable remedy, Hagyard's Pectoral Balsam. Asthma, Bronchitis and pulmonary complaints generally soon yield to its healing influence.

Chips.

LARGE quantities of ship knees are being hauled to the South Sebec, Me., station, to be shipped to various points on the coast.

THE Wilson Hoop Company, of Bay City, Mich., will use 2,000,000 feet of elm timber this year, from which they expect to manufacture 8,000,000 hoops.

NEW YORK exporters say that good walnut logs are in little demand in the European markets. Small ones are not wanted. They say, however, that the European markets in hard woods are generally bad.

ABOUT 1,700,000 rock maple last blocks were shipped from the vicinity of Bangor, Me., mostly to Massachusetts. The value of this output was more than $40,000. The shipments this year promise to be more than ever before.

ONE of the saddest phases of lumber business is the accidents, so often recorded, to children. Loggers permit their little ones to play around where trees are being felled, or to ride on loads of logs, and the result, too often, is what any one acquainted with the danger attending life in the woods might expect.

A MICHIGAN man contracting for a walnut counter, and the builder of it, following the usual custom, put in panels of whitewood stained in imitation of walnut. The work was not accepted; suit was brought, and the court decided that when a man buys a walnut article it must not in part be made of whitewood.

THE *Timber Trades Journal* says:—White Sea goods are moving off slowly, but at firm prices, and we consider there will not be much difficulty in maintaining values for stocks of this kind, as they are known to be short. The large fires we had to chronicle last year, and the consequent destruction of the mills at Archangel will help greatly to reduce the present season's shipments.

M. QUINN, of Saginaw city, who has been most of the winter in the vicinity of Duluth, is now at home, and reports that not more than two-thirds as much lumber will be cut in Duluth this present year as was cut in 1883. The reason he gives for this prospective falling off of the cut is a falling off in the demand, a large share of Duluth lumber heretofore having gone to northwestern markets.

GERMAN technical papers recommend the following mixture for the staining of wood in imitation of cedar; 200 parts catechu, 100 parts of caustic potash and 10,000 parts of water, all by weight. The longer the wood remains in this solution, the better the stain penetrates its fibres and thick veneers can in this way be stained right through the whole thickness, which permits a refinishing without injury to the color.

THE Willimantic Company is employing 125 men in its Maine spool mills and in the woods getting out spool timber. About 2,000 cords of birch were in the yards at a late date. The mills are turning out 4,500 gross of spools, and 9,500 gross of spool blocks per week. About 200 thread boxes are made a week. The number of spools required can be realized from the fact that 6,000 boxes and 80,000 gross of spools were ordered in February.

THE largest sale of lumber that has come to our knowledge this spring was recently made by the C. N. Nelson Lumber Company, St. Paul, Minn., to the Chicago Lumber Company, of this city. The amount purchased was 18,000,000 feet, and although the purchase price has not transpired, we understand it was in the neighborhood of $200,000, on car. The lumber is piled in the yard at St. Paul, and will be shipped to the various yards of the purchasers.

THE project to build a railroad from Saginaw to Adrian, Mich., so as to form a connection with the Wabash system, and an outlet southwestward from Saginaw, is again being aired in that part of the state. Saginaw, frightened at the prospect that lumber will be placed on the free list, disgusted at the apathy of eastern buyers this season, and tired of seeing those great piles of coarse lumber looming in the yards, naturally wants a range in western fields. The proposed railroad scheme is a means to the desired end.

National Manufacturing Co.

160 Sparks Street, Ottawa,

MANUFACTURERS OF



TENTS!

Camp Furniture and Hosiery.

OUR GOODS ARE THE BEST IN THE WORLD!

☞Four Gold and Silver Medals and Thirty-two First Prizes at the Toronto and Guelph Exhibitions, 1883.

☞Highest Awards at Sydney, New South Wales: Exhibition June, 1883.



Lumbermen's Tents

A SPECIALTY!

At Prices Lower than ever before.

HEAVY SOCKS

Our own make, and at Prices Very Low!

SHANTY BLANKETS

IN GREAT VARIETY.

Liberal Discount to Large Buyers. Send for Catalogue.

National Manufacturing Co.

160 Sparks Street, Ottawa.

L20 P. O. BOX 345

Market Reports.

TORONTO.

From Our Own Correspondent.

MARCH 24.—The weather, and, as a natural consequence, the condition of lumber, has materially changed for the better since my last letter, and all the dealers with whom I have come in contact are of one opinion, viz,, that although they are doing business on a small margin there is a brisk trade from the yards to partially compensate for the small profits obtained, and should the duties on lumber for the American market be thrown off, which many dealers firmly believe will yet come to pass, the coarser grades of lumber will hold its own or slightly advance on this market; but should the duties remain as at present, the inferior grades of lumber will undoubtedly go below present figures during the season now entered upon. This I think is conceded by all who have taken the trouble to form any opinion on the subject.

The arrivals by the N. &. N. W. R. R. at present are from 20 to 25 car loads per day, which, for the month of March, is considerably above the average of other years. Orders for Western Ontario also come in freely, the fine mild days during the past week have stimulated builders into more than their usual activity, which is not surprising considering the long period of forced suspension from business, and if the various branches of mechanics whose labour is utilized in the building trade will only be content with a moderate days pay for a fair days work, and no strike take place, a fair season's trade may be anticipated with a fair certainty of fulfilment.

Since writing my last letter the Grand Trunk Railway Company have so far acceded to their customers' wishes that all cars can now be shunted west to any part of the Esplanade free of charge, but owners of private switches, or sidings, have still to pay for such service. I doubt not but that the company will shortly see the injustice of charging owners of private sidings for shunting. In the first place parties have to pay for the making and keeping in repair, besides a nominal rent for all such sidings, so it is hard to see why they should have to pay for shunting service any more than the general public.

The N. & N. W. R. R. Co. still pursue their obstinate course and charge from $1 to $2 per car for all westward shunts. There is only one excuse that may be made, perhaps, with some show of reason, they doubtless require every dollar that can be made in order to make both ends meet, but in the long run it is doubtful if they will gain anything by their obstinate course as the position taken by them in this matter is not honestly tenable.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
Scantling and joist, up to 16 ft	13 00
" " " 18 ft	14 00
" " " 20 ft	15 50
" " " 22 ft	16 00
" " " 24 ft	17 00
" " " 26 ft	17 50
" " " 28 ft	18 00
" " " 30 ft	20 00
" " " 32 ft	21 00
" " " 34 ft	22 50@22 50
" " " 36 ft	24 00
" " " 38 ft	26 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 50
Three uppers, Am. inspection	35 00@45 50
B. M.	
1½-inch flooring, dressed	32 00
1¼ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	3 00
Sawn Lath	2 75

MONTREAL.

From Our Own Correspondent.

MARCH 25.—Business has been fairly active at Ottawa and quite a number of sales have been made there lately on American account at firmer prices, and the demand in New York and through the Eastern states is likely to be very fair. It looks as if the Americans would not take the duty off lumber as was expected, the leaders on both sides of the question are apparently afraid to touch the question just now. Some of the large concerns at Three Rivers have not made any logs this winter, but they have enough on hand to keep the mills going for this year. It is reported that G. B. Ball & Co.'s extensive mills at Montmorenci are going to saw for Gilmour & Co., of Ottawa, this year. Contracts for freight from Ottawa have been made about 10 cents less per 1,000 feet than last year's rates, which looks bad for the boatmen. Business here is quiet, but prospects are good as a considerable amount of building is going on, but the supply is more than equal to any demand which is likely to arise. Some kinds of hardwood from the Southern States and California, such as gum wood and California redwood are coming into this market to be used for house finishing and fancy furniture, but the stocks of them are still low. Our prices are unchanged, but laths will decline in price as soon as the mills begin to run. We continue to quote:

Pine, 1st quality, ℔ M	$35 00@40 00
P ne, 2nd " ℔ M	22 00@24 00
Pine, shipping culls, ℔ M	14 00@16 00
Pine, 4th quality deals, ℔ M	11 00@12 00
Pine, mill culls, ℔ M	10 00@12 00
Spruce, ℔ M	10 00@13 00
Hemlock, ℔ M	9 00@10 00
Ash, run of log culls out, ℔ M	20 00@25 00
Bass, " " ℔ M	17 00@20 00
Oak, ℔ M	40 00@50 00
Walnut ℔ M	60 00 100 00
Cherry, ℔ M	60 00@80 00
Butternut, ℔ M	35 00@40 00
Birch, ℔ M	20 00@25 00
Hard Maple, ℔ M	25 00@30 00
Lath, ℔ M	2 50@ 3 00
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 50@ 0 00

CORDWOOD.

The demand for wood is fair, but hardly so brisk as at the date of the last report. Stocks in the city are ample and dealers along the line of the G. T. R. and C. P. R. say that large quantities are got out and ready for shipment, but in the mean time no change has been made in quotations, which are ex cartage at the railway station:

Long Maple	$ 7 00
Long Birch	7 00
Long Beech	6 50
Tamarack	5 50

LIVERPOOL MARKETS.

The state of the lumber market presents no new feature, the consumption for February coming up to what was generally anticipated, and there is no material change to report in prices.

OTTAWA.

From Our Own Correspondent.

MARCH 22.—The approaching season's trade has opened very auspiciously, and prospects are consequently encouraging, and merchants entertain hopes of a thriving condition of things. Already a large sale has been made. Within the past week one of our local firms made a $100,000 sale to an American Company. A representative here of a foreign firm has told your correspondent that he expects to make unusually large purchases this season. This is only another indication that trade promises to be booming in the near future.

Within the past year a great change in shipping facilities has occurred in this district. The railroads have interfered greatly with navigation companies, but the latter seemingly intend to keep the competition lively as a number of them have increased their fleet. Messrs. D. Murphy & Co. recently purchased the fleets belonging to J. R. Booth and Perley & Pattee. These two firms having a large interest in the Canada Atlantic Railway ship nearly altogether by rail. This railway has built up an enormously large trade in lumber transhipment. To-day, as daily for the last two or three weeks, no less than 50 cars laden with lumber for the American market left the Chaudiere yard of that railway. The yard capacity of the road has been somewhat inadequate to the increasing extent of the business. and a number of new sidings are about to be put in at the Chaudiere yard.

THE UPPER OTTAWA.

The Rev. Father Paradis' scheme for regulating the water of the Ottawa river by the construction of a dam at the foot of Lake Temiscamingue, has seemingly met with the universal approval of the lumbermen of the Valley. Yesterday morning a deputation composed of Messrs. Bryson and Mackintosh, M. P.'s, Mayor Bate, ex-Aldermen McDougall, F. Clemow, P. A. Egleson, and Aldermen German, Desjardins, and others, waited upon Sir Hector Langevin, Minister of Public Works, and presented the honorable gentleman with a memorial and the petition which is given below, both of which set forth the importance of the scheme, the particulars of which have already appeared in the columns of the LUMBERMAN. It might here be stated, however, that by this scheme it is claimed that over twenty thousand acres of land, which area is now submerged, in the vicinity of the lake, would be recovered. Besides this important consideration there would be afforded what is supposed to be the only means of regulating the water of the river.

The following was the petition:—

To the Hon. Sir Hector Langevin, C.B., K.C.M.G., Minister of Public Works:

The petition of the undersigned humbly showeth:

1. That they have considered a certain memorandum discussing a new scheme for establishing easy communication between Mattawa and Lake Temiscamingue on the river Ottawa, submitted to your consideration by the Rev. Father Paradis, one of the Indian missionaries of the Upper Ottawa.

2. Most of your petitioners being lumber merchants interested in timber limits on Lake Temiscamingue have had the opportunity of inspecting the country around Mattawa and said lakes, and have given particular consideration to different schemes devised for opening up the communication above referred to.

3. Your petitioners unhesitatingly say that the scheme proposed by the Rev. Mr. Paradis, and so fully discussed in the said memorandum, is by far the easiest to carry out and at the same time most advantageous to the progress of the country it is intended to benefit, and the one best calculated to promote the agriculture, lumber, mineral and other interests of the country above Mattawa.

4. Your petitioners beg leave to submit that notwithstanding the immense sums of money derived yearly as a revenue to the country from lumbering sources, yet, comparatively nothing has ever been done by the Government towards aiding or facilitating that particular branch of our Canadian commerce.

Your petitioners therefore pray:

1. That your may be pleased to submit the said scheme to the earliest possible consideration of the Government, and to recommend the adoption thereof.

2. That steps may be taken towards the prompt execution of said scheme.

3. That such further or other relief may be granted as to you may seem meet.

And your petitioners as in duty bound will ever pray.

Perley & Pattee,	Sherman, Lord & Hurdman,
Bronson & Weston,	Gilmour & Co,
James Gordon,	(Estate) Levi Young,
E. B. Eddy,	W. R. Thistle & Co.,
E. T. Wright,	O. Latour,
J. O. B. Latour,	M. L. Stewart,
Francis Clemow,	C. H. Mackintosh,
W. H. Lewis,	W. E. Brown,
F. McDongal,	P. H. Chabot,
T. P. O'Conner,	Jas Warwock,
Liblanc & Lemay,	Thompson Bros.,
C. O. Dacier,	E. & H. Borlridge,
R. S. Montgomery,	P. Baskerville & Bros.,
T. Borkett,	W. O. May,
Jacob Erratt,	E. McGillivray,
Bryson, Graham & Co.,	J. M. Garland,
P. C. Anclair,	Kearns & Ryan,
R. W. Scott,	M. Ogara,
Dupus & Nolan,	J. Sweetland,
R. J. Devlin,	J. Boyden,

W. H. Rowley.

Sir Hoctor Langevin received the deputation with his characteristic cordiality, and, after hearing their representations, promised that an investigation as to the feasibility of the scheme would be made at once.

WINNIPEG.

The *Commercial* of March 18th says:—Although the demand in the lumber line has not increased very much during the past week, signs are not wanting of returning activity, and inquiries about early wants have been quite numerous. Business is not yet in a state in which any but nominal quotations can be given, but within a week or two it is expected that matters will be into an even flow, and quotations based upon actual transactions will be obtainable.

Pine lumber, 1st, common boards, dressed	$26 50
do, 2nd, dressed	25 50
do, 1st dressed rough	26 50
do, 2nd do.	25 50
Sheating, rough	25 00
Timber 16 feet and under	24 00
do. over 16 feet, for each additional 2 feet.	1 00
Dimension and joists 16 feet and under	24 00
do, do, over 16 feet for each	1 00
Fencing	25 00
2 and 3 in. battens	30 00
A. stock boards, all widths	50 00
B. do. do.	45 00
C. do. do.	40 00
D. do. do.	35 00
1st clear, 1, 1¼, 1½, and 2 inch	60 00
2nd do. do. do.	56 00
Window and door casings	50 00
Base boards, dressed	50 00
1st pine flooring, siding and ceiling	40 00
2nd do. do. do.	35 00
3rd do. do. do.	30 00
½ inch split siding, dressed	30 00
Spruce lumber—timber 16 feet and under	22 00
do. over 16 feet for each additional 2 feet.	1 00
Dimension and joists, 16 feet and under	23 00
do do. over 16 feet, for each additional 2 feet	1 00
Boards	22 00
1st flooring, siding and ceiling,	28 00
XX shingles	5 25
Star A shingles	5 25
X shingles	5 00
A. do.	4 50
Lath	4 50

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ℔ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	45 00@50 00
Pine, good box	22 00@33 00
Pine, 10-in. plank, each	00 42@00 46
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 21
Pine, 10-in. boards, 16 ft., ℔ M	28 00@32 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	18 00@20 00
Pine, 1-in. siding, select	43 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@85 00
Cherry, common, ℔ M	25 00@35 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	38 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 4 90
" clear, "	0 00@ 3 30
" cedar, mixed	0 00@ 3 50
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ℔ M	0 00@ 2 75
Lath, spruce, "	0 00@ 3 00

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

BOSTON.

MARCH 18.—The most noticeable feature of the lumber market consists of the large export movment of lumber from this port. What is being shipped is coarse stock, Canadian and Michigan pine, which is brought here on through bills of lading from Canada and the West. Vessels are now loading here for Port-au-Prince, Buenos Ayres, Gaudaloupe, Vera Cruz, Australia and the Cape of Good Hope, which will take out lumber. Some Southern pine is being shipped from here, after being worked over by the Laconia Car Company. The demand for building purposes is moderate as yet, but the tone is fair. In Southern pine the mills at the South are firmer, and freights are higher the Atlantic ports at $6, and the Gulf at $7.00 to $7.25. The spruce manufacturers have elected F. A Pitcher, president; A. L. Brown vice-president; David Birnie, secretary and treasurer. They have decided to make no schedule of prices this season. The spruce mills are fairly busy on orders taken at the recent decline, and are hoping to get better prices. There is a large supply of logs secured and it is conceded that with water to market the logs prices will be lower in about two months. Trade is slow, but with good weather operations will be more active. Shingles are quiet, but there is more demand for clapboards. In hardwoods the trade is very good. A

feature is the increased demand for walnut, which promises to be more used for finishing purposes, as it wears better than cherry, ash or butternut.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

CHICAGO.

The *Northwestern Lumberman* of March. 22, says :—Indications at the East are a little more encouraging. It has become more evident, than appeared earlier, that the season is to be an active one in building enterprises. Wholesale dealers at Albany think the outlook for a brisk season's business is promising. Inquiry from all directions begin to come in. Considerable lumber has changed hands at Saginaw and Bay City, Mich., within the week, and a number of instances of mill cuts sold are spoken of.

It is claimed in eastern Michigan that inquirers find but little fault with prices when they can find the lumber that suits them. For this reason good stocks are considered reasonably firm in value, and the holders at Saginaw points assert they do not fear a decline. At the same time they admit a surplus of coarse lumber, that is liable to some depreciation in value. It is further claimed that the in-put of logs the past winter will run better to good stock than did the crops of the last two years.

A noteworthy feature of the Michigan eastward trade is the increasing reach after good lumber northwest of the old fields of supply. Uppers are now being shipped from Menominee to the East, large amounts from eastern Wisconsin and from the Lake Superior region, and whole mill cuts go from Cheboygan, Michigan, Grand Marais, and other points in the upper country. The tendency is to go further northwest after lumber to meet the demand of the eastern market.

The March demand throughout the northwest is evincing considerable strength. At some points on the Mississippi trade has been better this month than it was in February. This is probably largely on account of the Iowa and north Missouri demand, as it is claimed that the trans-Missouri yards are generally filled up as the result of the late low rate. The call upon the trade of this city is very fair for this month and increasing.

There is some solicitude felt in the Northwest as to the effect of the unexpectedly heavy log crop will have on the value of the coming season's lumber output. The conviction has become general among the handlers of stocks in the trade that common lumber will sag a little in value. This conviction is shared by a large number of the mill men. Just why this impression has been allowed such a large place in lumbermen's minds is not very clear. The prospect of a large consumption of lumber is certainly good, while the capacity of the mills, though somewhat greater than last year, may be offset by the prospective increase of consumptive demand consequent on the growth of the country. It will be safe enough for lumbermen not to be over hasty in forming a conclusion about lumber values till a little later in the season. The market may develop an unexpected strength. Yet this is but a possibility, while the probability is that values on common stock will be soft and pliable at figures not much removed from the present range.

Receipts of lumber, shingles, etc., for the week ending March 20, as reported by the Lumberman's Exchange :—

	RECEIPTS. Lumber.	Shingles.
1884	4,879,000	1,036,000
1883	2,524,000	1,180,000

FROM JANUARY 1, 1884, TO MARCH 20, 1884, INCLUSIVE.

	RECEIPTS. Lumber.	Shingles.
1884	25,548,000	5,674,000
1883	25,169,000	18,147,000
Increase	16,379,000	
Decrease		12,473,000

STOCK ON HAND MARCH. 1.

	1884.	1883.	1882.
Lumber	476,514,288	546,411,311	378,558,184
Shingles	333,406,479	238,643,350	162,302,900
Lath	48,006,454	54,139,448	33,426,283
Pickets	2,515,647	2,746,626	2,354,511
Cedar posts	289,742	153,278	112,088

OSWEGO, N. Y.

From Our Own Correspondent.

We change quotations as below. Trade has improved some since our last. The stormy weather interferes with delivery as well as sales, a succession of snow and rain storms has prevailed since March set in.

Three uppers	$44 00@45 00
Pickings	34 00@35 00
Fine, common	20 00@24 00
Common	13 00@16 00
Culls	10 00@13 00
Mill run lots	14 00@18 00
Sidings, selected, 1 inch	30 00@35 00
1¼ inch	30 00@36 00
Mill run, 1x10, 12 inch	17 00@19 00
selected	22 00@26 00
Shippers	13 00@16 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@12 00
1x6 selected for clapboards	22 00@35 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 00@ 3 50
XX pine shingles	2 30@ 2 50
Lath	2 00@ 2 25

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@47 00
Common	18 00@24 00
Culls	12 00@14 00

LONDON.

The *Timber Trades Journal* of March 8, says : With respect to colonial goods, though most of the various items are slightly heavier than they were last year at this time, they cannot be considered oppresive, and if we look back four or five years we shall realize to the full extent the lightness of the stocks of 1883 and 1884. At that period the usual quantity of pine representing the winter supply here was rather over than under a million pieces, whereas latterly the number of pieces rarely exceed 900,000, and this spring, including ends, there are very little over 700,000 pieces in stock.

The chief feature is, of course, the moderate stocks of deals from the Baltic ports, and which is undoubtedy reassuring to those who have their yards pretty full, and were looking with considerable apprehension to the dock supplies.

That these will be supplemented with any very large shipments when the navigation opens is unlikely, if all we hear of the moderate proportions of the stocks at the shipping ports can be depended on, as shippers will be in humour to consign on the off chance of sale prices advancing.

Though somewhat heavier, yellow pine and spruce stocks are not so materially different from what they were last year. Prices supposing trade to be in anything like an average state of activity, need not be affected ; but the general indifference displayed by merchants on all sides is becoming characteristic of each succeeding spring. We thought last year opened dull, but this one is even worse. A great deal of the recent stagnation arises from the open character of the winters we have been treated to which enables late buyers to get every stick home, and with nothing definitely settled as to prices they have really no object in rushing into the market. Shippers, in their turns are impatient at the attitude the market has assumed, and where they confidently looked for a ready sale at their own prices they find they are unable to make an impression.

GLASGOW.

The *Timber Trades Journal* of March 8th, says :—Arrivals of wood goods during the week have been a large cargo of teak at Greenock and one of sawn pitch pine. At Glasgow there have been no cargo imports. There is a slightly better inquiry springing up ; and although prices do not appear to be hardening as yet, the steady depletion going on with little incoming may lead to firmer rates. The stock of spruce deals is getting low, and of some dimensions inquired for there are none in first hands.

The Clyde shipbuilding for the past month has been sixteen vessels, measuring 28,730 tons. The return for February 1883, was 33,560 tons, and February, 1882, 28,300 tons.

The vessels of all classes now on the stocks all over are stated to be about 90, but shipbuilders complain of an absence of inquiries, and some of the yards are already presenting an empty appearance, prices, although understood to be greatly reduced, not inducing owners to build. Of last month's work one-half is foreign owners,

J. S. MAYO

IMPORTER AND MANUFACTURER OF

MACHINE OILS

OF EVERY DESCRIPTION.

9 Common Street, Montreal.

AMERICAN LUBRICATING OILS A SPECIALTY.

As I carry the LARGEST and BEST assorted Stock of OILS in the Dominion, I am prepared to fill all orders Promptly and at

LOWEST MARKET PRICES.

1 yr.20

and one-half, it may be noted, is constructed of steel.

AUCTION SALES.

On 28th ult., at Greenock, Messrs. Allison, Cousland & Hamilton, brokers :—

		Per cub. ft.
Quebec yellow pine timber—		
62 c ft av per log		1s. 3½d.
Quebec waney boardwood—		
(large square)		2s. 3d.
small		1s. 3d.
Quebec oak—		
64 c ft av per log		1s. 8½d.
Hewn pitch pine—		
80 c ft av per log		1s. 3d.
Quebec 3rd pine deals—		
14 to 16 ft	7/16×3	1s. 0½d.
13 "	11×3	1s.
9 "	11×3	10½d.
Quebec 3rd pine ends—		
6 to 8 ft	7/11×3	9¾d.
Quebec 4th pine deals—		
16 ft	11/14×3	9¾d.
Quebec 4th spruce deals—		
12 ft	9×3	9d.
Spruce scantlings—		
7 to 12 ft	4×2	8d.

On 5th inst., at Glasgow, Messrs. Singleton, Dunn, & Co., brokers :—

		Per cub. ft.
Quebec 1st yellow pine deals—		
12 ft	9/11×3	2s. 5½d.
Quebec 3rd yellow pine deals—		
16 ft	11×3	1s. 1½d.
13 to 16 "	11×3	1s. 1d.
Quebec 4th yellow pine deals—		
16 ft	11×3	11d.
10 to 16 "	11×3	10¾d.
12 & 13 "	7/11×3	1s.
Quebec red pine deals—		
14 ft	9×3	10d.
Quebec 1st spruce deals—		
12 ft	9×3	1s. 1½d.
Quebec 2nd spruce deals—		
12 ft	10×3	10½d.
Quebec 3rd spruce deals—		
10 & 11 ft	9×3	9¾d.
10 to 16 "	7/11×3	10d. & 10½d.
St. John, N. B., spruce deals—		
19 ft	11×3	10½d.
12 & 15 "	9×3	10½d.
Miramichi spruce deals—		
10 to 25 ft.	13/15×3	11¾d.
9 " 24 "	10/13×3	10½d.
9 " 22 "	7/9×3	9d.

LIVERPOOL.

The *Timber Trades Journal* of March 8th says :—We have again had a very quiet week of business ; Few orders of any importance have been in the market. Prices remain low, and with the inanimate condition of trade generally, our principal dealers are not disposed to enter into large transactions for future delivery.

If the trade is to assume a healthy and sound tone it can only be done by restricting the importations to as great an extent as possible ; but this one subject appears difficult for shippers to comprehend, or if do they pay little heed to it.

The Mersey Docks and Harbour Board have issued a list of timber they want, and for which tenders are invited, consisting principally of pitch pine, which will in some degree help to wake the trade from its present lifeless condition, as amongst other items they want 55,000 cubic feet hewn and 32,000 cubic feet sawn timber.

The failure of a firm of Manchester timber merchants is reported, in which several Liverpool houses are interested, but it is said that there is every probability of a good dividend being obtained.

LIVERPOOL TIMBER SALES.

On Friday last Messrs. A. F. & D. Mackay sold by auction a cargo of St. John, N. B., spruce deals and birch and a cargo of sawn pitch pine. There was a fair attendance of buyers, and both cargoes were sold ; prices, as will be seen, shew no alteration from previous rates.

RESULT OF AUCTION SALE AT LIVERPOOL, 28TH FEBRUARY, 1884.

877 logs birch timber, ex Thomas Perry, from St John N. B., containing 24,748 cub. ft.

18 & 18½ in,	21½d.
18 "	20d.
17½ "	19d.
17 "	18½d.
16½ "	18½d. & 18⅝d.
16 "	18⅝d. & 19d.
15½ "	17d. & 17½d.
15 "	16⅝d. & 17d.
14 "	16d & 16½d.
13½ "	15½d.
13 "	16½d
Maple	16½d.
Ash	23½d.

Average price 17½d. per cubic ft.

£16,302 spruce deals, 1st, 2nd and 3rd qualities.

		£ s. d.	£ s. d.
16/25 ft.	3×11	7 12 6	
12/15 "	3×11	7 5 0	
9/11 "	3×11	6 17 6	
16/28 "	3×9	6 15 0	
12/15 "	3×9	6 17 6	
9/11 "	3×9	6 12 6	
16/28 "	3×7	6 12 6	
12/15 "	3×7	6 10 0	
9/11 "	3×7	6 10 0	
9/23 "	2½×7	6 17 6	
Broad deals		7 0 0	
6 in, & scantling		6 0 0	6 2 6
Boards		6 0 0	
Ends		5 17 6	

Average price £6 17s. 10d. per standard.

TYNE.

The *Timber Trades Journal* of March 8, says : In American goods the demand is of the smallest possible, as shipbuilders have got fairly well filled up for present requirements and but little in prospect. The dispute about wages having been settled this week by a substantial reduction will help a little, but with the number of steamers laid up for want of employment it is not likely that many will be built during the present season.



Lumber Drivers' Calks

TEMPERED IN OIL.

25 BALL and 5 HEEL to Set

The Calks are now used by all the principal Drivers in Maine and New Brunswick.

Kept by Dealers in Lumbermen's Supplies

FOR SALE BY

T. McAVITY & SONS

Dealers in Lumber and Mill Supplies,

ST. JOHN, N. B.

Samples sent by mail on application.

ROBIN & SADLER

Have been awarded Three Years in succession at the Provincial and Dominion Exhibitions in Montreal, First Prizes for

LEATHER BELTING

LEATHER BELTING

Fire-Engine Hose, &c.

Send for Price Lists and Discounts to the Factory

594, 596, 598, St. Joseph Street,

MONTREAL.

NATIONAL PUMP WORKS.

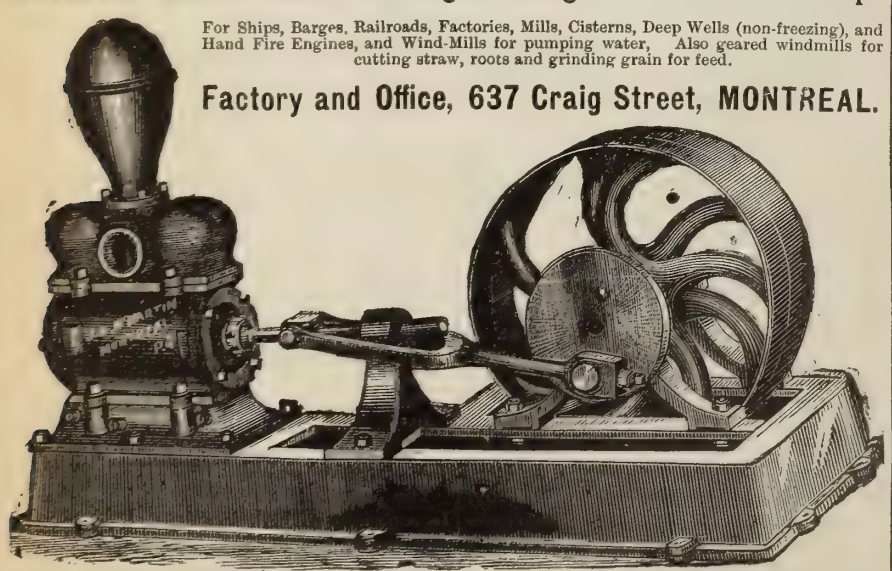
J. A. McMARTIN & CO.,

SOLE MANUFACTURERS OF THE

McMartin Patent Double and Single Acting Lift and Force Pumps

For Ships, Barges, Railroads, Factories, Mills, Cisterns, Deep Wells (non-freezing), and Hand Fire Engines, and Wind-Mills for pumping water, Also geared windmills for cutting straw, roots and grinding grain for feed.

Factory and Office, 637 Craig Street, MONTREAL.



The above cut shows our Double Acting Brass-Lined Horizontal Suction and Force Pump, mounted on a Cast Iron Bed Plate with tight and loose pulleys, 4 inch face, 18 inches diameter. This is one of the most compact and powerful Pumps of the kind yet out, with Bed 4 feet long and 2 feet 2 inches, where the pulleys are placed, all being in good proportion. The pump has a guide to the piston rod, and is driven by the connection rod attached to the disc with Steel pin and wrought iron connections. The valve seats and valve are made of gun metal, and easily got at by bolts on either side of the pump, so that access to the bottom or top valve can be had without any difficulty. We make two sizes of these pumps, which are adapted for mills, factories or tanneries. We make these pumps with a clutch to drive them direct, when so ordered, and dispose of the pulleys and belt.

All inquiries will be promptly answered, by addressing the above, and catalogues of our pumps sent out. 2L6

THE INTERNATIONAL

TENT & AWNING CO.

184 Sparks Street, Ottawa.

MANUFACTURERS OF

32 First Prizes AT TORONTO *1883.*



6 MEDALS AT HALIFAX *1883.*

LUMBERMEN'S TENTS

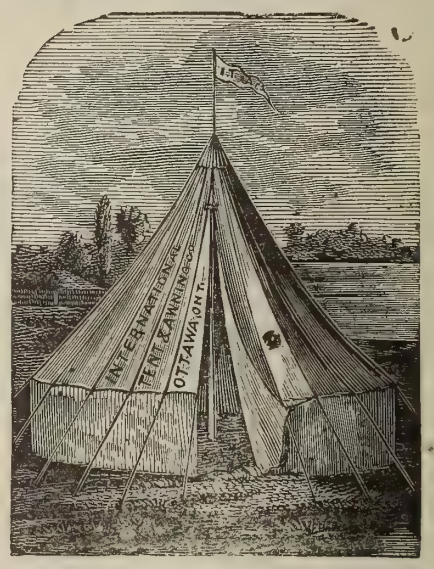
The Cheapest and Best in the Market!

Tents, Flags, Tarpaulins, Waterproof Goods, Camp Furniture, etc., etc.

Estimates for Circus Tents, Range Marquees, Hand-made Sails, etc., furnished on application. Liberal Discount to Large Buyers.

PORTABLE CANVAS BOATS MADE TO ORDER

SEE OUR NOVELTIES IN **Camp Furniture!**



Send for CATALOGUE AND PRICE LIST!

At Toronto, Ont., and St. John, N.B., we made the best Display of Tents ever shown in Canada—and we never substitute an article inferior to sample in filling orders.

We control "THE LATOUR PAT." for Camp Furniture, the best on earth. The only Gold Medal ever given for this class of goods was awarded to the Latour Camp Furniture at Toronto in 1882.

SAIL-MAKING.

We have secured the services of the best practical sail-maker in Canada. Orders in this line will receive prompt and satisfactory attention, as is usual with all orders entrusted to us.

Agency for the WILDERMUTH BED SPRING, the best in the Market.

A. G. FORGIE, MANAGER,

International Tent & Awning Co.,

184 SPARKS STREET, OTTAWA.

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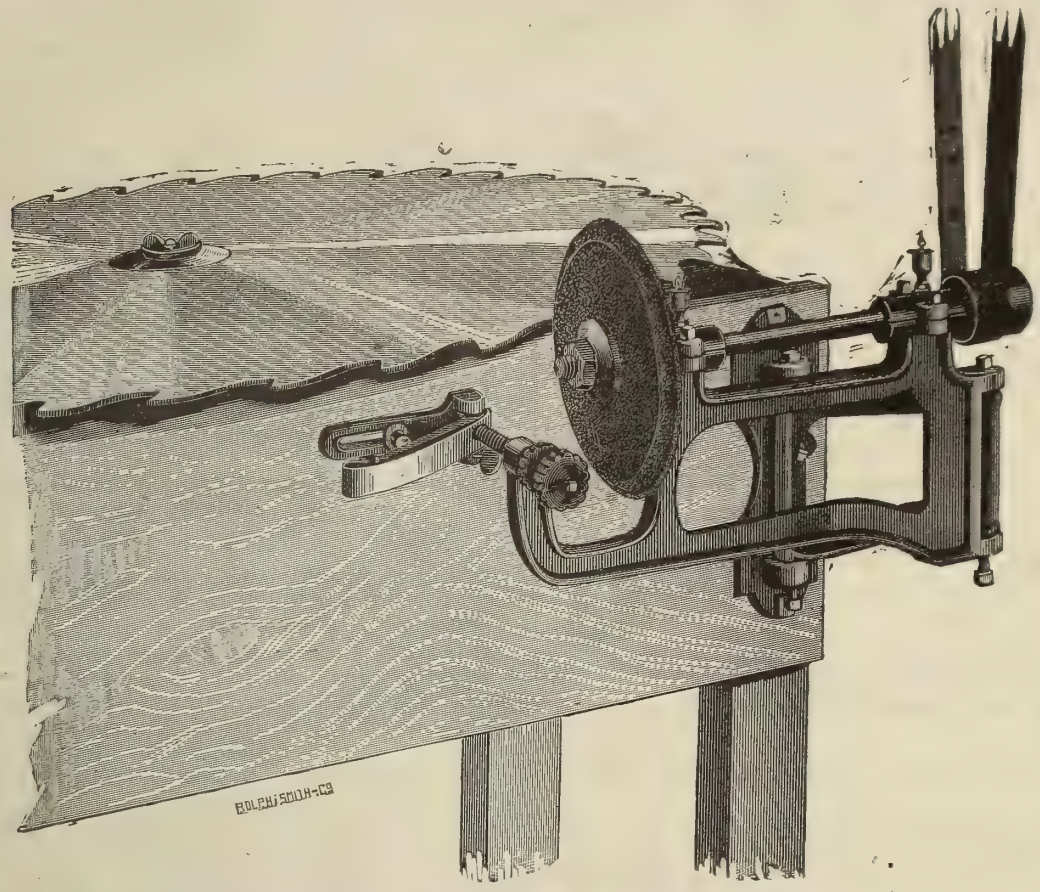
ROGERS' PATENT
SAW GUMMER and SHARPENER

The Handiest Machine for these purposes ever Invented.

Don't Heat!

Cheap!

Very Simple!



Accurate!

Works Fast!

Complete!

Lumbering Season, 1884

Saw Mill Owners in providing for the season of 1884, ought not to lose sight of ROGERS' SAW GUMMER for it will save them more money in proportion to the amount invested than any other machine.

Only $30, including Emery Wheel; Table and Countershaft, $10 extra.

A few of ROGERS' SAW GUMMERS were put on the market last season, and we quote some of the commendations received:

JAS. HADDEN, Foxmead, says:—
"Your machine is all I expected."

CHAS. ANDERSON, Anton Mills, says:—
"I have given it a good trial, and am well pleased with it. "I find it is one of the indispensables in a saw mill." * *

ROBT. R. WEIR, Orillia, writes:—
"It works like a charm, and is very accurate in its work."

CRONE & PATTON, Hoc Roc Mills, Gravenhurst, says:
"The Rogers' Saw Gummer purchased from you gives "good satisfaction, * * it cannot be beat."

D. DAVIDSON, Pentanguishene, writes:—
"We are well pleased with the Gummer."

W. W. BELDING, Wyevale, writes:—
"I have the Gummer running and it is giving good "satisfaction."

ADDRESS ALL ORDERS TO THE

Hart Emery Wheel Company, Limited - Hamilton, Ont.

☞Manufacturers of Hart's Celebrated Patent Wire Strengthened Emery and Corundum Wheels.

The Improved CLIMAX Sash Lock

MANUFACTURED BY MILLER BROS., GUELPH.

Holds the Sash in any position so that it cannot be moved either up or down, can be put on by anyone, only requiring two screws.

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RAE & WATSON, 22 Church Street, TORONTO, Ont.

F. E. DIXON & CO.

MANUFACTURERS OF

STAR RIVET

LEATHER BELTING

70 King Street East, Toronto.

SPECIALTY: Belting made from J. B. HOYT & Co's American Oak Tanned Leather. ☞Send for Price List and Discounts.

MONTREAL AXE WORKS

T. J. MOCOCK & Co.

St. Gabriel Locks, - Montreal,

—MANUFACTURERS OF—

AXES and EDGE TOOLS

OF EVERY DESCRIPTION.

Old and Reliable, the Best Axes made in Canada.

12L20

HUGH GIBSON,

MANUFACTURER OF

KNIGHT'S PATENT "EXCELSIOR"

SAW MILL DOGS

The Sawyer's Favorite

For Holding Logs upon a Saw Mill Carriage while being Sawn into Lumber.

MISSISSIPPI, June 7th, 1883.

HUGH GIBSON, ESQ.,—Your Patent Excelsior Mill Dogs give entire satisfaction, and is certainly up to your recommendation. They are the best Mill Dog in the market. I am very much pleased with them.

Yours Respectfully,
PETER McLAREN.

BERKLEY, April 20th, 1883.

HUGH GIBSON,—SIR,—The Dogs I bought of you give satisfaction. They beat any Dog that I ever saw for ripping or edging lumber on carriages. They are just the thing for scantling. I would not take $50 for them to-day and have to wait for another pair to come from you, because I believe they make two dollars a day for me.

Yours truly,
2L1y GEO. S. BROWN, JR.



EXCELSIOR DOG.

Manufactured by HUGH GIBSON, CHATHAM.

EAGLE FOUNDRY!

GEORGE BRUSH

14 to 34 King and Queen Sts, MONTREAL,

MAKER OF

Steam Engines, Steam Boilers, Hoisting Engines, Steam Pumps,

CIRCULAR SAW MILLS, BARK MILLS, SHINGLE MILLS,

Water Wheels, Mill Gearing, Shafting, Hangers and Pullies,

Hand and Power Hoists for Warehouses &c., &c.

Also, Sole Manufacturer of BLAKE'S CHALLENGE STONE BREAKER.

AND AGENT FOR 1yL21

"Water's" Perfect Steam Engine Governor, and "Heald & Sisco's" Centrifugal Pumps

EXTRA HEAVY AMERICAN

Oak Tanned Leather Belting.

RUBBER BELTING, RUBBER PACKING, RUBBER HOSE, LINEN HOSE and COTTON HOSE.

☞A Full and Complete Stock always kept on hand. ☞WRITE FOR PRICES and DISCOU TS.

We have the Largest and best equipped RUBBER FACTORY in the world for the manufacture of VULCANIZED INDIA RUBBER GOODS for Mechanical Purposes.

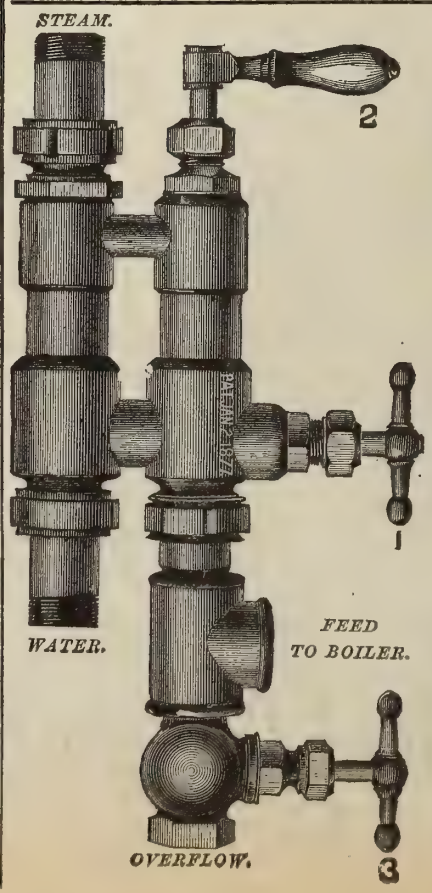
Our trade here has increased to such an enormous extent that in order to keep up with the demands, we have purchased from Major John Gray, M.P.P., Parkdale, the plot of ground situated on West Lodge Avenue, adjoining the Credit Valley, Toronto, Grey and Bruce, Northern and Grand Trunk Railways, for the erection thereon of a BRANCH RUBBER FACTORY, works to be in full operation January 1st, 1884.

THE GUTTA PERCHA AND RUBBER MANUFACTURING CO.

T. McILROY JR.

WAREHOUSE:—10 and 12 King Street East,

P.O. BOX 556. 1L6m TORONTO.



THE

Hancock Inspirator

The Best Feeder known for Stationary, Marine or Locomotive Boilers.

THE INJECTOR PERFECTED!

All Sizes lift water 25 feet. No adjustment required for varying Steam Pressures.

Over 50,000 Now in Use.

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5 CUSTOM HOUSE SQUARE,

MONTREAL, P.Q., CANADA.

Manufacturers of Inspirators, Ejectors, and General Jet Apparatus.

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The William Hamilton Manufacturing Co'y

MANUFACTURERS OF (LIMITED,)

SAW MILL & GENERAL MACHINERY

We make a Specialty of Heavy Saw Mill Machinery.

OUR SAW MILL ENGINES are made Strong, Neat, and Durable, knowing well the ever varying strain they are subjected to in driving a Saw Mill.

We wish to call the attention of our Canadian Lumbermen to our First Class HEAVY SAW MILL MACHINERY for CIRCULAR MILLS and CIRCULAR and GANG MILLS of the most improved designs. We are prepared to submit Plans and Specifications, together with any information that our many years of close application to the Saw Mill Business may have suggested to us, also when required to enter into contract for building and supplying the machinery complete, superintending the starting of the same, and handing over the mill to its owner in first-class running order.

OUR HEAVY SINGLE CIRCULAR SAW RIG, Complete, with or without Top Saw, Rack, Rope or our Improved Steam Feed (Patent applied for), is acknowledged by our leading lumbermen to be a first-class article, got up in the best manner possible, and furnished with Headblocks and Dogs to suit our Customers. We also manufacture a lighter Circular Rig for the smaller class of mills (or where there are two circulars required in the same mill), which is exceedingly smart in its movements, and supplies a long felt want in this direction.

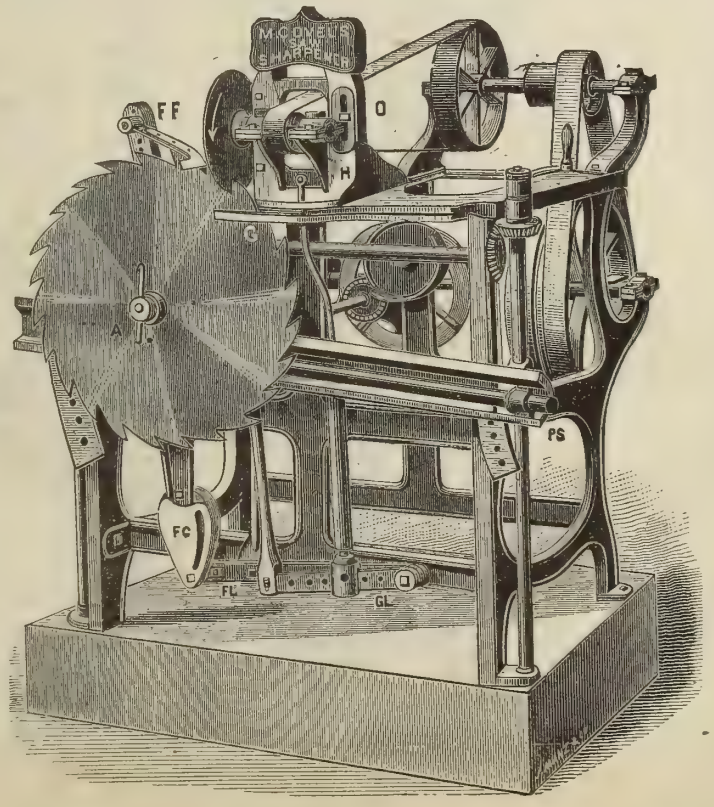
OUR PATENT TWIN CIRCULAR RIG with Rack, Rope, or our Improved Steam Feed (Patent applied for), is now the favourite Machine for Slabbing Logs, and is acknowledged by all to be the smartest and the best Machine for this purpose in the market.

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Our most improved LOG CANTERS for Turning Logs on Carriage. We also furnis 1 them with Weirs' Patent Incline Attachment for rolling logs from Skids on to Carriage.



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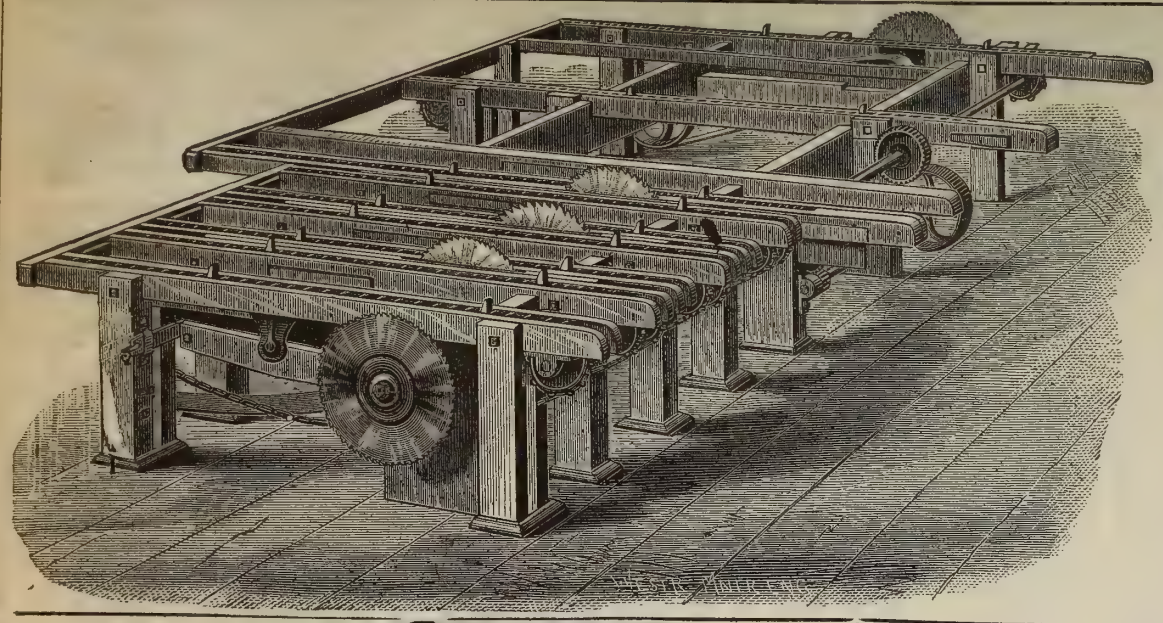
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with all the latest improvements, which Machine has only to be known tobe appreciated.

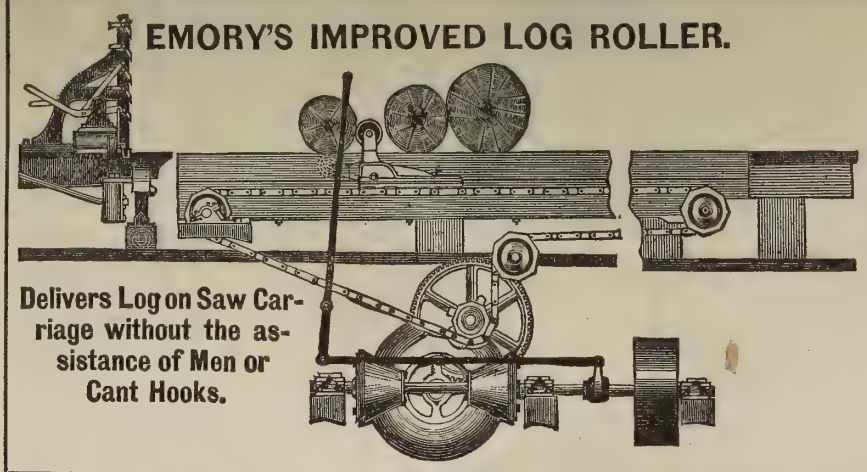
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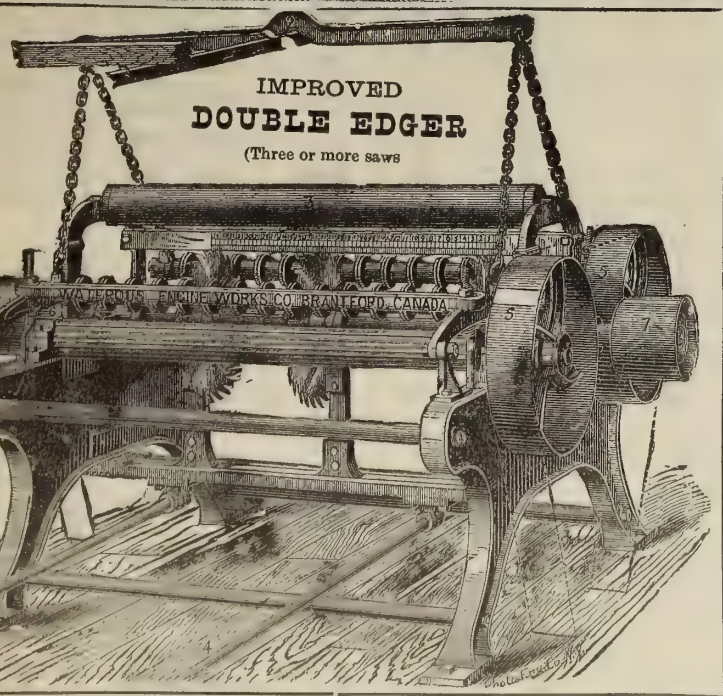
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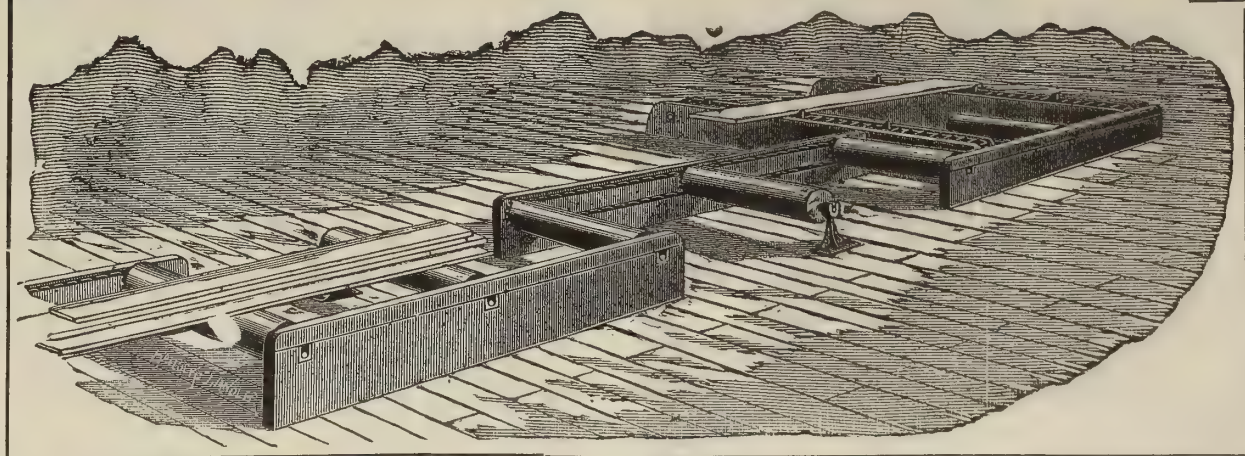
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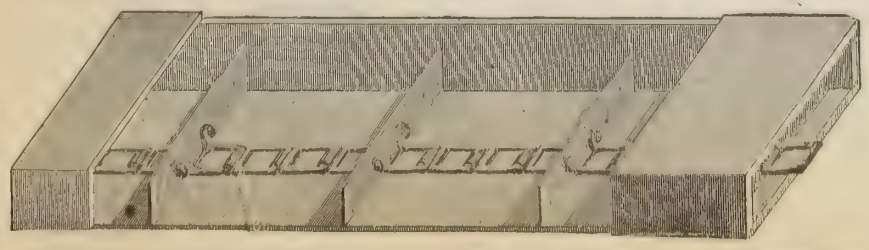
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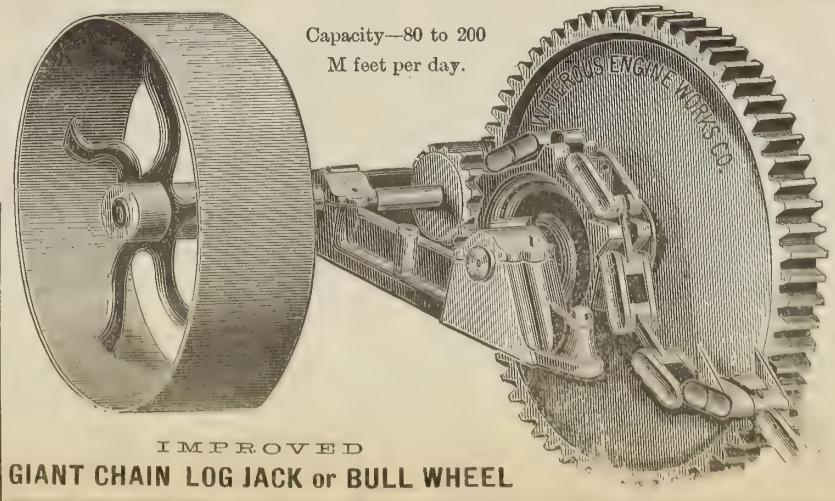
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PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

VOL. 4. PETERBOROUGH, ONT., APRIL 15, 1884. NO. 8.

MANUFACTURES OF WOOD.

Canada has been called a "wooden country." How far this is properly a term of reproach we cannot say; but seeing that wood in the raw stage of squared logs or lumber, forms $25,000,000 worth, or say a fourth in value of our yearly exports, and that we send abroad a considerable aggregate of manufactures of wood besides, we may well bear the nick-name. Let us, however, eschew such wood goods as wooden nutmegs or hams. We ship to Europe, already, tool handles, broom handles, carriage spokes, hubs and felloes, spools or bobbins, brush backs, &c., &c., in considerable quantity. We might do more in the direction of wooden ware export, and indeed it seems to us that, in this, as in other lines, Canadian manufacturers will *have* to look about them for foreign markets, since the means of production, over-stimulated as they have been are outstripping the home demand.

A recent article in the St. John *Sun* deals with the subject of "a market for wooden wares," and alludes to the extensive business done in Great Britain and the Continent by American makers of wood goods, as an encouragement to New Brunswickers to go and do likewise. Some of them have gone, and have done well. Others in that province as elsewhere, being less prudent or less fortunate, have not found any *bonanza* in the venture. But here are the facts: Great Britain and other European countries use enormous quantities of wooden goods, and they are largely made in the United States and shipped from Boston and New York. Why should not Canada, whose supplies of timber are nearer the sea-board compete successfully? It can be done; but it is not likely to be done in a day. Nor is it to be done without observation and pains. Some of the requisites are thus set forth in the *Sun's* article:

"A knowledge of the English market is essentially necessary at the outset, no matter what kind of wooden manufacture may be decided upon, and in no way can this be more accurately secured than by personal observation and investigation; indeed it would be advisable for our manufacturers to place a practical man in England, one thoroughly acquainted with our woods," to meet the deals and manufacturers there. Such a man, it is contended, could settle all preliminaries and put the Canadian and home manufacturers in direct communication with each other, for much of the supply of such wares will be required in an unfinished state, to be put together after their arrival in England.

"Goods must invariably be consigned to people who understand this special branch of trade, one great cause of failure in the past being due to the fact that our New Brunswick manufacturers sent their wares to personal friends, such as ship brokers, etc., who were totally unacquainted with what was going on outside of their own lines, and who did not know how to dispose of the goods when received, to the best advantage. Pieced goods, such as boxes of all kinds, etc., must be packed in the smallest possible compass, so as to reduce freight charges to a minimum, and should be consigned to parties who can put them together before placing them on the market. In all cases, samples must be secured from England, and when received must be carefully reproduced, the slightest deviation often ruining their sale."

In this, as in other business, it is a fatal mistake to employ as salesmen persons who have not a practical acquaintance with the market. The other circumstance referred to, which we have italicised, is one of great importance. The English, the Scotch, the Australians, and the Brazilians, when they grow accustomed to a certain style of shoe, shape of butter tub, description of rocking chair, will use no other. The lack of a certain tiny flournish on a shoe-top, made in silk with a sewing machine, as per sample, has been known to spoil the sale of a thousand pairs. And Brazilian firms will refuse to buy, or even to sample, the choicest lard or good kerosene, simply because it lacks a customary brand or is put up in unaccustomed packages. Therefore, specimen articles must be reproduced with the utmost exactness, and the fancies of the foreigners must be catered to in respect of package.

Mr. James I. Fellows, a public-spirited citizen of St. John, has been making enquiry abroad in the interests of his province, about wood pulp and other products of Canadian wood for export. And he has furnished valuable data. Mr. Ira Cornwall, jr., who is at present in this country, has been doing likewise, and gives the result of his enquiries to the journal we have quoted. Says Mr. Cornwall, he is speaking of New Brunswick:

"Chief among the articles that can be manufactured here with profit are packing boxes of all sizes, our woods being really better suited for this work than those found on the continent. Salt and fish boxes are also required in endless quantity. Window sashes, casings, doors, and door casings of the better class of woods can be sent to England at a good profit, though it is doubtful if it would pay to compete with the United States in slop work of the cheaper wood.

Laundry and kitchen tables and patent folding tables are in demand; also cloth boards, pastry boards, rolling pins, potato mashers, wooden bowls of all kinds, clothes horses, wringers, towel rollers, ice-cream freezers, knife and fork boards and boxes, wash boards (a very large item), pails, tubs, churns, and handles for brooms, mops, hoes, rakes, hammers, hatchets and edge tools generally.

There is a large demand for common wood bedsteads, much of the supply of which article is now received from Boston; while chairs and furniture in parts, hat and clothes wall racks, step-ladders, folding and patent ladders, bench screws, bobbins and spools are standard articles in unlimited request. There is a limited demand for shoe pegs. Toy or minature washtubs, pails, chamber sets, wagons, wheelbarrows, log cabins, bureaus, sand mills, and fancy boxes, with some taking novelties, from a special line that could be sent to England with profit to all concerned.

House fittings and furniture made according to the architects plans, open up a line for the higher class of wood work which could be operated by a competent agent on the spot, supplied with sample woods, etc., who could negotiate directly with the architects. Indeed the present is a most favorable opportunity for initiating this industry, as mahogany and dark wood generally are now considered bad form in England, the lighter woods taking their place. A factory could here find a field for the manufacture of immense quantities of the better class of flooring, borders and base boards, wainscottings, window sashes, doors, carved mantels, etc.—the furniture of the house to correspond with its woodwork from designs by the architect. * * *

Special attention must be paid to the manufacture of spools and bobbins. The very best seasoned woods must be used, and the articles made to an exact guage. As silk, etc., is reeled not measured, the necessity for accuracy in the size of the spool is obvious. There is tremendous demand in England just now for Venetian blinds; while ships' furniture presents another line in which very much can be done.

Mr. G. Flewwelling, a New Brunswick manufacturer, who has devoted much time and care to obtaining a knowledge of the English and West Indian market for wooden ware, in speaking of the vastness of the field awaiting the enteprise of New Brunswickers, says:—"Properly worked, this business is large enough to keep every mill in New Brunswick, and many more, running full time to supply the orders that would come to hand."—*Monctary Times.*

LUMBER TRADE OF FRANCE.

In viewing the lumber trade of France during 1883, the *Marchand de Bois*, of Paris, says the lumber dealers generally did not regret to see the year's business brought to a close, as it had been for the most part an unprofitable one, and the number who did profit by it were quite limited.

The year had opened with excellent prospects; with stocks moderate; but the anticipations were early in the year dissipated by unexpected complications in the industrial affairs of the country. Those who had made purchases at the beginning of the season had every prospect of selling at a profit, but the status of the output was of such a character as to alarm the larger dealers; they forced their goods on the market and disturbed values. The fall in prices was hastened without apparent cause, but was in the main attributable to the general stagnation of affairs throughout the country, especially the department of building. This stagnation seriously manifested itself in Paris, where the excess of construction was first felt.

To show the extent of the decline in prices, it is necessary only to quote comparative prices of a few dimensions. White wood timber which brought a remunerative price at the close of 1882, declined in one month from 20 to 25 francs per standard ($2 to $2.25 per 1,000 feet; and battens of good ordinary quality, that brought 120 francs (about $23 to $24) to 80 to 85 francs, and planks which were readily sold at the beginning of the year at 120 to 140 francs, fell to 85 francs. Notwithstanding this heavy decline in values, failures in the lumber trade were very rare.

The year 1884 opens with cheerful prospects. Stocks are small, and if the affairs of the country generally does not receive a back set the lumber trade of the year promises to be satisfactory. In the import trade steam was largely used, but there is always a demand for sailing vessels, as a number of the French ports do not possess sufficient water for steamers. During eleven months of 1883 there were imported into France from the Baltic, Canadian and pitch pine ports, 135 million tons, against 155 million for the month of 1882.

Redwood.

Humboldt county contains 450,000 acres of redwood, which is estimated to cut on an average, 100,000 feet to the acre. On this are at work about fifteen mills, with a capacity of 20,000 to 60,000 feet each per day; altogether probably near 600,000 feet of lumber a day is cut in the county. The whole amount of redwood in the State is estimated by the Census Bulletin at twenty-five billion, five hundred and fifty million feet, and as an idea of how much is consumed it may be of interest to know that 186,735,000 feet were used up in the year ending May 21, 1880. This consumption has increased enormously since then, and the amount must be now very much greater, as they are now supplying a very large foreign as well as domestic demand.

The Uses of Paper.

There seems to be no limits to the manufacture of articles made of paper. Houses, smoke stacks, steamships, are among the recent products, and now we are told in earnest that experiments are carried on to make boots and shoes from paper. Well, there is no telling where invention will stop in our present age, and although we may doubt the success of this attempt, we cannot deny its possibility.

AN INDESTRUCTIBLE TIMBER.

The Western Australian timber is attracting the attention of European manufacturers and builders on account of its strength and durability, and the *Timber Trades Journal* has undertaken to collect all reliable data, bearing upon the subject, from which we learn the following:

Analyses made by Prof. Abel, in England, show the valuable property of the timber which enables it to resist decay, and at the same time form a vegetable poison to insect life. Prof. Abel says: "In accordance with instructions received, I have made a qualitative analysis of sundry specimens of the Jarrah, with a view of obtaining from its chemical composition, actual proof of the principle which renders the timber impervious to the action of dry rot, and proof against the attacks of the *teredo navalis* and the white ant.

"I find that the duramen contains from sixteen to twenty per cent. of an astringent gum, somewhat resembling the gum kino of commerce, sparingly soluble in alcohol, but completely so in boiling distilled water.

"Upon further analysis, this gum was found to consist almost entirely of coloring matter, and a highly astringent vegetable acid, which may be termed 'Jarrah tannic acid,' inasmuch as it possesses some of the characteristics of tannic acid, together with other relations peculiar to itself.

"I have failed to discover an alkaloid or organic base(although several different processes have been adopted), since, after the separation of the gum, albumen and coloring matter, I obtain nothing more than traces of saccharose and glucose with fatty matter, which in the present inquiry are of little or no importance. It is therefore evident that the active principle of the Jarrah is the powerfully astringent acid, which, uncombined with any base, is suspended in the gum, and thereby uniformly diffused throughout the tissues of the wood in a thin section, of which innumerable translucent particles of the gum may be seen by the aid to a small convex lens."

The following is an extract from a communi cation forwarded to India, by H. C. Victor, Esq., C. E., of Perth, in reply to inquiries made by some gentlemen engaged in the carrying out of several large contracts for public works in Scinde, Rajpootana, and Central India:—

"Undoubted authority is unanimous in declaring that the timber of the Jarrah under certain conditions, is indestructible. His excellency, Governor Weld, in a communication to Earl Kimberly, on the subject of Jarrah for marine purposes, expresses himself to the same effect, his positive declaration being based on strict inquiry, and the collection of information from all sources likely in any way to set at rest doubt, and to introduce to the world its true character. Prof. Von Mueller, the Government Botanical Director of Victoria, a gentleman well acquainted with the Jarrah, says:—Its wood is indestructible, is attacked neither by chelura, teredo, nor termites, and is therefore so much sought for jetties and other structures exposed to sea water. Vessels built with this timber have been enabled to do away with all copper plating. It is very strong, of a close grain, slightly oily, and resinous in its nature, works well, takes a fine finish, and is by shipbuilders in Melbourne considered superior to oak, teak, or any other wood for this purpose. The committee of Lloyd's, under the authority of their secretary, after the representations of his Excellency, Governor Weld, informed the the Earl of Kimberly, that they had determined to rank this timber with those named in line No. 3, table A, attached to the societies' rules for the construction and classification of ships. Among the facts arrived at by the Government of Western Australia, in submitting this timber for acknowledgement at Lloyd's, are several of a very interesting and valuable character. The Imperial Government clerk of works at Fremantle, speaking from twenty years' experience, and use of considerable quantities of this timber, says:—It is remarkably free from all the action of nearly all the ordinary forms of decay incidental to woods which are in contact with, or buried under ground, under water, at mortises or other joinings, in piles in sea jetties, and in planking sea-going vessels, without sheathing or other protection, it has proved sound and enduring to an extent which appears to denote exemption from decay, so far as evidence can be derived from observation on timber, exposed for upwards of thirty years. I have recently taken up piles that were driven for a whaling jetty in the year 1834 or 1835, making a period of at least thirty-five years; the timber is small, but perfectly sound and free from insects, although the place is swarming with teredo.

"The purposes to which Jarrah timber may be applied are innumerable; it fills the place where saul and teak could not be admitted, as well as where they are used; and as the material can be supplied at a price somewhat less than the timbers named, in the log, at half their price in scantling, it should be employed where hitherto timber has been considered undesirable—for instance, in sea-facing, dock-lining, landing-stages, break-waters, and beacons; kerbs, road-paving, block-flooring, weather-boarding, and wainscot-partitions; wallings, ceilings, and roof-coverings. As a substitute for the roofing usually constructed in India, I believe shingling with Jarrah, only requires to be known to be appreciated. At a distance these shingles might be mistaken for grey slates; they lie so close and regularly; thin as they are, they make a remakably cool roof, and when once set require little or no repairs for years. I have seen here, where many roofs are of this material, houses that have not cost $5 in roof repairs for twenty-five years. Their lightness admits of a considerable saving in the roof framing, and yet with all these advantages, the shingles do not readily catch fire, burning charcoal thrown on them chars a hole, but does not flame them. It is one of the most uninflammable timbers that can be found. A fair trial cannot fail to make the Jarrah very poplar."—*Ex.*

THE PLANTING OF TREES.

A new word, forestry, formerly a mere dictionary word, and hardly that even, has come into common daily speech, and we hear of forestry congresses, schools of forestry, and other applications of it which indicate altogether a change of sentiment on the subject of trees. For centuries the dweller on this continent looked upon the forests that overspread so much of its surface as a barrier in the way of his progress which had to be removed. So, with might and main the pioneers everywhere assailed them, and ruthlessly to right and to left a path was hewn out for advancing civilization. It was long before any practical man discovered that such indiscriminate slaughter of the trees of the forest was a mistake, and those who first uttered words of warning received small attention. Only when the great treeless plains of the west, overswept by icy blizzards, made the new comers regret the grove shelters of the east, did men begin to realize the blunder of making havoc among those natural protectors. Other regrets followed in time as it was discovered that not only for warding off storm in winter and heat in summer, not only as fuel in building material, but as serving an admirable purpose in connection with climate and temperature and the distribution of rainfall and other features of the wonderful economy of nature, the destruction of the trees in the usual wholesale fashion was a waste of resources of which the consequence could not fail to be widely injurious. During the last few years this conviction has gradually spread over the whole of North America (not to speak of other countries) and with it has come a desire to repair, as far as possible, the mischief done, as well by putting restrictions on the cutting of timber and taking other measures for its preservation as by giving all possible encouragement to forest renovation and tree-planting, where needed.

It is not necessary to recount all that has been done in this direction during the past few years. Suffice it to say that both in the United States and our own provinces governments and people have fully awakened to the advisability of vigilance in preventing further waste, and of fruitful effort in reforestation, and what the public now require to know is exactly what and and how to plant, so as to effect most good. Anyone who would compile a handy volume or manual on the subject, giving intelligibly and concisely all needful directions on those points would surely, one might think, be performing a task of universally recognized utility. Nor, perhaps, could any one be found better fitted to undertake it than the zealous and active chief of the forestry division in the department of agriculture at Washington. For years Mr. N. H. Egleston has, by reports, addresses at conventions and articles in magazines, been advocating the cause of forestry and recommending the course to pursue in actual conditions and circumstances. His name is as familiar in Canada as in the United States to all those who have given the subject any attention, and there is no one whose authority on any forestry question is likely to have more influence than his. It is, therefore, with pleasure we announce that Messrs. Appleton & Company have just published a little work from his pen entitled a "Hand-book of Tree-planting" which is at once concise and comprehensive and thoroughly practical. And as it deals with the whole extent of American territory, it is almost as well adapted for use in Canada as in the United States.

Mr. Egleston says that a high civilization is impossible without trees and, therefore, no time should be lost in covering, if possible, the treeless regions of the continent. The wheat fields of the plains are made far more productive when supplied with tree shelter. For these and other reasons he does not hesitate to place the treeless western regions first in giving his answer to the question, where to plant? Of the practicability of tree planting there, even in masses, he writes hopefully basing his judgment on experience. The hill sides and mountain slopes of the north and east and the pacific region, stony, sour, sandy or otherwise sterile lowland tracts, lines of railroad, and the country roads and streets of cities and towns, follow in the order named as localities on which trees might be probably planted.

On the question, what to plant, Mr. Egleston begins by saying that in general it is safe to advise the inexperienced tree-planter to plant native trees—that is, such as grow spontaneously in the region where the planting is required. On that point the decision of nature herself may be accepted as to the best choice to make. It may be added that, as Mr. Gibb and Prof. Budd have shown, the trees of the old world may generally be expected to thrive when planted in like climates and conditions in the new. But how about those treeless wastes where it is so important to have both a speedy and permanent covering of woody vegetation? In such case let the puzzled experimenter go to the nearest stream or wherever a few trees have been spared from fiery devastation or are struggling into life amid surrounding desolation and take them as his sure indication. Seeds or sprouts from those trees he may plant with confidence and after he has covered the nakedness of the ground and made himself a little shelter, he may persevere with still greater confidence, making new trials with suitable exotics till the injuries of the past have been repaired. On this continent, both in the United States and Canada, there is ample variety from which to choose, whether fuel or building, or ornament or shelter be the object.

We cannot, of course, attempt to summarize the valuable information that Mr. Egleston gives his readers on the manifold stock of native and domesticated trees, nor can we pretend to give the substance of his instructions as to the mode of tree-planting. We have called attention to his work as one likely to create and deepen the interest in a most important movement—one of the most important in which the statesman or the citizen can be engaged at the present time.—*Montreal Gazette.*

FORESTRY.

In the annual address of the President of the Fruit Growers' Association for Ontario we find the following remarks on forestry:—

In the important department of forestry, which now comes within the scope of our Association, much useful work has been done. The report of the delegates appointed to attend the meetings of the American Forestry Congress last year, which was published as an appendix to our report, was full of useful information; and has done much towards bringing about a healthy sentiment in favor of tree planting. Early in August last a delegation from this association, consisting of your Secretary and President, were sent by the Commissioner of Agriculture to represent the Province of Ontario at the meeting of the Forestry Congress held at St. Paul, Minnesota. The assembly was presided over by the United States Commissioner of Agriculture, Dr. Geo. B. Loring, and some important business transacted. Our sister Province of Quebec was represented by the Hon. Mr. Joly, of Quebec, and Mr. Stewart Thayne, of Ottawa. At the close of the meeting the delegates of your association accompanied by the Hon. Mr. Joly, visited Manitoba where they were joined by Mr. Gibb, of Abbotsford. At the instance of the Deputy-Minister of Agriculture, a public meeting was called at Winnipeg, at which the Lieut-Governor presided; where the visitors were glad to give a large and deeply interested assembly, all the information at their command. As one of the results of our visit, a Provincial Association was there and then formed for the promotion of Horticulture and Forestry, and an order for hardy Russian fruit for Manitoba is now being forwarded along with that for Ontario.

REVIEWS.

SHAVINGS AND SAWDUST.—We have received from the publishers of the *Lumber World* of Buffalo, N. Y., a very interesting and instructive work called "Shavings and Sawdust," by Mr. John Kane. It treats in a very practical and yet lively manner of the designing, construction, care and operation of woodworking machinery. Some of the chapters were published in the *Lumber World* under the name of "Observer," but they have been extensively revised, and much has been added. To the millowner, to the manufacturer of machinery, and to the mechanic, whether employed in the making or using of woodworking machinery, this work will suggest ideas that may be of the utmost value to them. Some chapters such as those on belts are even of more general application. The book is well printed and got up. A portrait of the author forms the frontispiece.

Testing Steel Rivets.

The following are the latest instructions issued by the British Admiralty for testing steel rivets. The rivets are to be made from steel bars, having an ultimate tensile strength of not less than 58,000 pounds per square inch of section, nor more than 67,000 pounds, with a minimum elongation of not less than twenty per cent. in a length of eight inches. A portion of one bar in every fifty to be taken for testing before being made into rivets. Pieces cut from every bar, heated uniformly to a low cherry red, and cooled in water at 82° F., must stand bending in a press to a curve of which the inner radius is equal to the radius of the bar tested. Rivets are to be properly heated in making, and the finished rivets allowed to cool gradually. The rivets to stand the following forge tests:—(1.) The shank to be bent double cold, without fracture, to a radius equal to the radius of the shank. (2.) Bent double hot, without breaking, to as small a radius as possible. (3.) Flattening of the rivet head while hot, without cracking at the edges—the head to be flattened until its diameter is 2½ times the diameter of the rivet shank. (4.) The shank of the rivet to be nicked on one side, and bent over to show the quality of the material. One rivet in every hundred to be forge tested as a sample.

CURE FOR RHEUMATISM.—Sufferers from either acute or chronic rheumatism will find no more ready relief or better cure than Hagyard's Yellow Oil, the popular household remedy for external and internal use in all painful affections.

NAMES, FACTS AND FIGURES—Will be cheerfully given by the proprietors of Burdock Blood Bitters, regarding the many certificates of wonderful cures made by that medicine in chronic diseases of the blood, liver and kidneys, revealing proof that it is beyond the possibility of dispute by the most incredulous.

A QUESTION TO THE POINT.—Reader, have you a languid, weak and tired feeling, with nervous exhaustion, especially in the early spring? Then your liver is inactive and circulation poor. Arouse the torpid liver, clense the sluggish blood and regulate the secretions with that purifying tonic Burdock Blood Bitters.

AMERICAN SAWS:

We represent Four of the Best American Saw Factories

VIZ.

AMERICAN SAW Co.

Emerson, Smith & Co.

R. HOE & Co.

Hubbard, Bakewell & Co.

Inserted Tooth, BIT TOOTH,

AND

SPECIALLY THIN SOLID SAWS

We run 60-inch to 72-inch Solid Saws, as thin at center as 10 gauge at rim—saving, over a 7 gauge saw—1000 feet of lumber in every 25,000 cut.

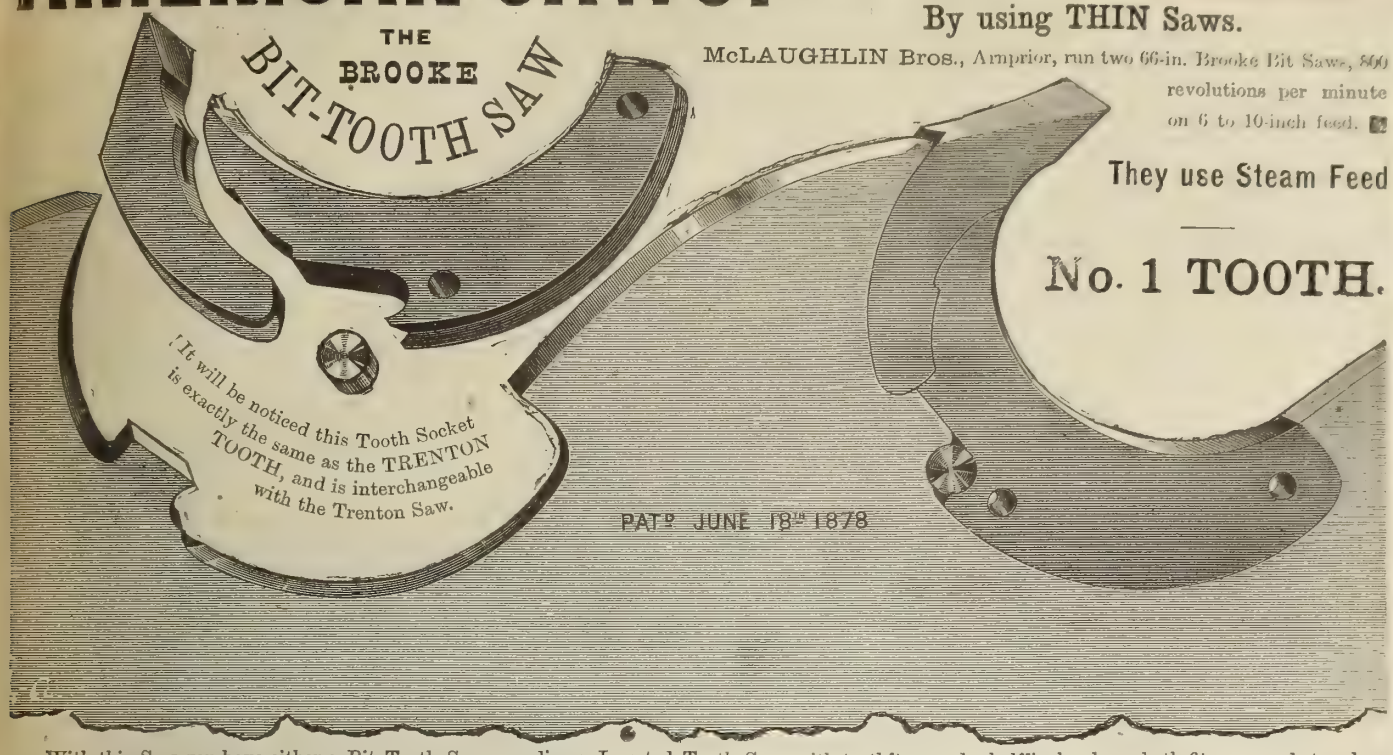
☞SAVE YOUR TIMBER

By using THIN Saws.

McLAUGHLIN Bros., Arnprior, run two 66-in. Brooke Bit Saws, 860 revolutions per minute on 6 to 10-inch feed.

They use Steam Feed

THE BROOKE BIT-TOOTH SAW



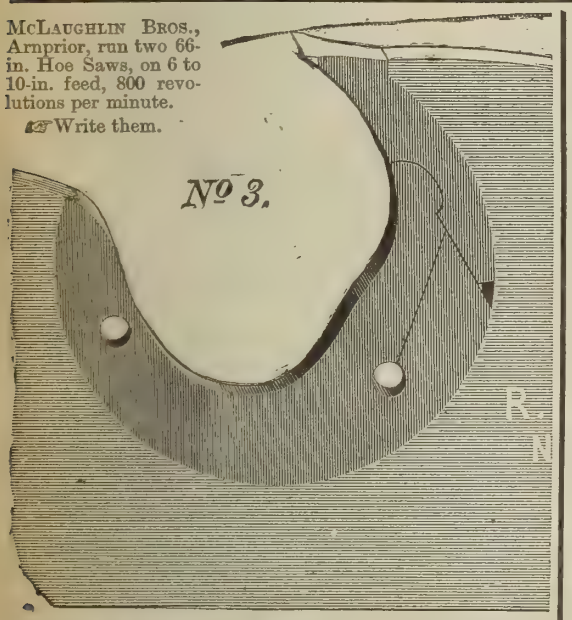
No. 1 TOOTH.

With this Saw you have either a Bit Tooth Saw or ordinary Inserted Tooth Saw, with teeth two-and-a-half inches long, both fit same socket and are interchangeable in a few minutes. These Bits require no gumming, and very little filing; are so firmly held that they will stand all necessary swaging, and can be worn down to dotted line shown in cut; they rest on lugs, saving the strain on the rim of the saw. For these reasons they will cut more and better timber at less cost than any other tooth. EXTRA BITS (per 100) No. 1. $9; No. 2, $8.—(per 1000), No. 1, $80, No. 2, $70.

Two sets No. 1 Bits have cut 500 m. feet pine, in 60-inch saw, running 800 revolutions per minute, on 6-inch feed. E. E. PARSONS, Arnprior.

McLAUGHLIN BROS., Arnprior, run two 66-in. Hoe Saws, on 6 to 10-in. feed, 800 revolutions per minute.

☞Write them.



HOE'S PATENT BIT SAWS.

One of the best Bit Saws made, above cut represents usual size tooth, one size larger and smaller made. ☞Send for particulars and prices.

SAVE TIMBER — GROW RICH



EMERSON'S EXTRA THIN SOLID SAWS

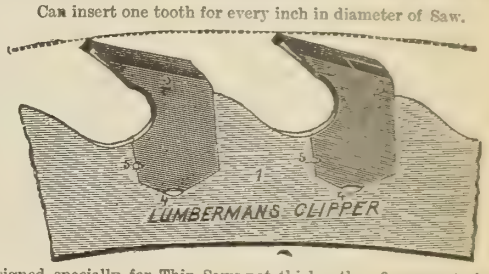
Having special facilities for the manufacture of extra thin saws for board mills, we are prepared to receive orders for Circular Saws as follows:—54 inches in diameter, as thin as 12 guage at rim and 11 at center, 54 to 56; 11 guage at rim, 10 at center, 66 to 72; 10 at rim, 9 at centre. Our unparelleled success with thin saws during past few years has induced us to recommend them to our customers. Our superior facilities are:—1st, Evenness of Temper; 2nd, Perfect Accuracy in Thickness, Saw balances perfectly; 3rd, Properly Hammered, to have equal strain in all its parts and at same time run true. This department is under the special supervision of J. E. Emerson, who has had 30 years experience and is without doubt the most successful circular saw maker in the world.

☞NO EXTRA PRICE FOR THIN SAWS.☜

EMERSON'S LUMBERMAN'S CLIPPER SAW

Can insert one tooth for every inch in diameter of Saw.

Extra Teeth 25c. each.



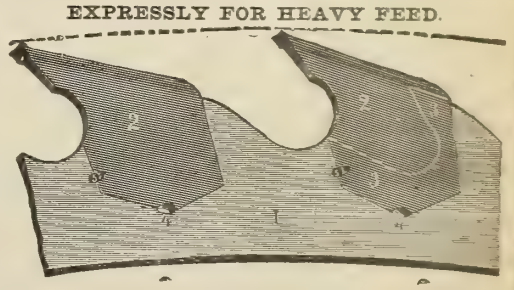
Extra Teeth 25c. each.

Designed specially for Thin Saws not thicker than 6 gauge at rim, or thinner than 15 guage at rim.

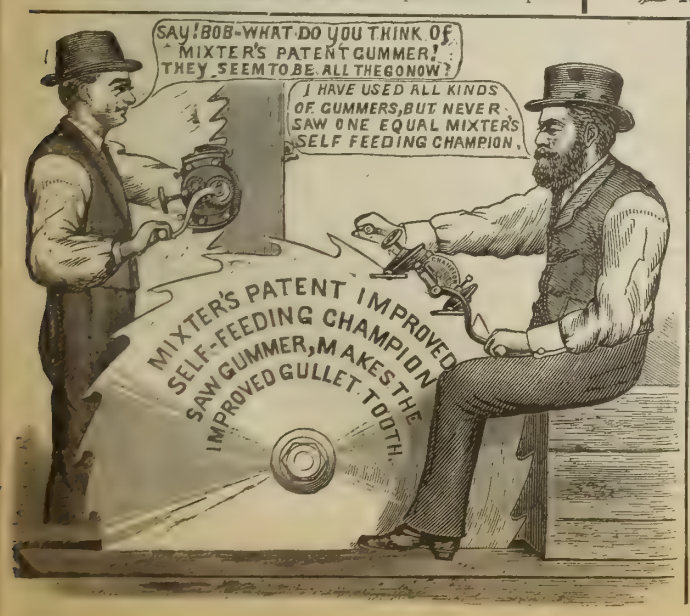
The CLIPPER FLANGE SAW

EXPRESSLY FOR HEAVY FEED.

Extra Teeth 50c. each.

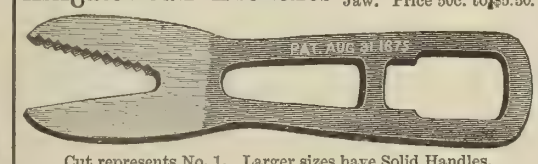


Two and a half inches long



Alligator Jaw Wrenches

5 sizes, grip from ½ to 3 inches, Iron. Solid Steel Jaw. Price 50c. to $5.50.



Cut represents No. 1. Larger sizes have Solid Handles.

WE KEEP IN STOCK ALL KINDS OF

Saw Mill Furnishings

SAW GUMMERS:—Stone's Original, large and small size; Mixter's Self-feeding Champion; Emery Wheels and Stands.

SAW SWAGES:—Hoe's, Emerson's, Mixter's, and American Saw Co.; from $1.50 to $6.00.

SIDE FILES, BELT STUDS, Detachable Belt Fastners.

JARECKI'S PATENT SCREW, PLATE, and PIPE CUTTER, ½ inch to 2 inches, $28.00; smaller ranges in proportion

Band Saws, Scroll Saws, Rainbow Saws for felling trees, American Shingle Saws, Lace Cutters. Cant Hooks. Flue Scrapers, Leather, Cotton and Rubber Belting.

SPECIAL AGENTS FOR GANDY'S PATENT MILL BELT, runs wet or dry; the best and cheapest main driver

WORTHINGTON and BLAKE'S PATENT STEAM PUMPS. ECONOMIST PLANER and MATCHER COMBINED, large range of work, light, handy, durable, cheap.

Ewart's Detachable Chain For Log Jacks, Refuse Carriers, Sawdust Carriers, all sizes. Live Rolls, Tranfers, Slow Speed Driving Belts, Tie Loaders, Slash Tables, Trimmers, Lumber Sorters, Shingle Block Elevators, and many uses about a saw mill.

HIGH CLASS HEAVY and PORTABLE SAW MILL MACHINERY our Specialty.

Waterous Engine Works Co., Brantford

Send for New Price List and Chain Circular. ☞Mention this Paper.

WASTE IN THE LUMBER INDUSTRY.

Among all the wastes of the lumbering interests there is perhaps none as important as the sawdust. The reasons for this assertion are more than one. The waste of lumber during its cutting is more apparent, undoubtedly, but less expensive, because it does not need any extra handling and transportation. Unless parts of the trees remain on the ground or are burned, if necessity requires it, but, at any rate, the labor involved in its riddance is comparatively small. With the sawdust it is entirely different. All the waste resulting from this source in the manufacture of lumber has been paid for more than once. As it formed part of the original tree, it was paid for in cutting, then in the various modes of transportation, and finally the time is coming when its removal has to be paid for again, unless somebody will devise ways and means for its economic transformation into something else. The manufacture of gas from sawdust will hardly meet with favor at present, because the larger saw mills are more or less remote from cities where the gas could be utilized, and the bulky form will exclude any distant transportation unless its volume can be reduced so that the transportation charges will compare favorably with those of coals for the gas industry. The very instability of the lumbering districts, which change from place to place as timber is cut, will exclude the erection of any costly establishments for the utilization of sawdust in the neighborhood of saw mills, and the question, what to do with it assumes larger and larger proportions, not only from a pecuniary, but also from a hygienic point of view. It is now believed that malaria on the banks of the streams where saw mills are located, is largely due to the decomposition of the sawdust and other wastes thrown into the water by the mills. Fishermen complain that fishes either die or forsake their home waters as soon as the streams are made the receptacles of saw mill waste. In New York State, we are told, a proposition is on foot to prohibit by law the throwing of wastes into the streams by mill owners. Public opinion, that all important factor in the formulation of laws, has had, by constant agitation and discussion, its attention directed to the subject, and saw mill owners will do well to act on the principle "forewarned is forearmed" and encourage the inventors of the country to exercise their genius towards an economical disposal of the sawdust. A prize, high enough to be worthy of competition, could easily be subscribed for by the large number of saw mill establishments, and the successful inventer would be the benefactor of a large community of people in more than one sense of the word.—*Buffalo Lumber World.*

THE SAW AND ITS ORIGIN.

The Phœnicians, says the *Miller and Manufacturer*, are among the earliest of the races credited with using the saw, for these skilful mechanics are supposed to have erected the temple of Solomon, "stone-sawed within and without." The wasp may be said to have been the first sawyer, and probably initiated his next of kin, the mosquito and bee, into the secrets of his trade. Grecian mythology tells us, that the inventor of a saw once found the jaw bone of a snake, and used it to cut through a piece of wood, then imitated it by jagging an iron plate and thus made a saw. The uncle of the inventor become jealous, and is said to have murdered his nephew. It may have been that the uncle wanted to secure the patent exclusively for his own benefit. Saws of the bronze age have been discovered in Germany and Denmark, but not in Great Britain, the metal of which was cast thin, and probably serrated by chipping and grinding. In the stone age, obsidian was used in Mexico, a kind of glass prduced by volcanoes, usually of black color and opaque, except in thin splinters. It was so named according to Pliny, after Obsidius who discovered it in Ethiopia. Saws and knives of obsidian have been disinterred in the alluvial ground of New Jersey beneath the recent gravel. They are held to prove extensive coast-wise trade, as no obsidian has been found closer than Mexico. The ground referred to as alluvial, is made by deposits of sand, clay, or gravel, formed by river action or by sweeps of waves over the land, and as no authority is given us to believe that obsidian saws were actually used except in Mexico, it is presumed they were swept to these shores by the action of the waves, being cast into the waters by accident or design.

The saws of Lacustrians, and other early inhabitants of Europe, were of jagged flint; those of the Caribs or West India Islands, of notched shell. Japanese saws are shaped like butcher cleavers, the handle flattish, as if whittled from a piece of inch board, and the shank of the saw driven into the handle, the whole secured, by being wrapped with fine split cane. The teeth are narrower than those of our saws, giving more of them to the inch, much longer and pointed toward the handle. A saw discovered by Mr. Burton, and now in the British Museum, represents a long thin blade, tapering slightly at the end, with a thick, short, and awkward handle, the blade rudely driven into the wooden hilt. It is supposed to be of Egyptian make, and was discovered in Thebes. The saw is an ancient device, and probably as old as a knife with a ragged edge; they are of various designs, and different material according to the use to be made of them, and have been improved upon and modernized with each succeeding age, until they have attained the acme of perfection; skill and ingenuity can hardly devise a finer implement than the modern saw, made of best tempered metal, light and easily handled, and of graceful workmanship.

Not least in the varied collection of saws, and one that has been most useful in ancient and modern times, is the stone saw. According to Manetho, Sesostris is credited with having introduced the art of building with hewn stone. Heavy masonry previous to his time, is supposed to have been cyclopean; that is, heavy blocks were fitted together by adapting to each other in the wall, such faces as they already possessed. In the sixteenth century, marble became common in English architecture. Pliny give an account of cutting marble with the saw, and states the different kind of sand used. "For it is the sand," he says, "that does the work, not the saw."

Oliver Evans, of Philadelphia, in 1803, had a double-acting high-pressure steam engine at work grinding plaster and sawing stone. He drove "twelve saws in heavy frames sawing one hundred feet in twelve hours."

WOOD-CHOPPING IN RUSSIA

In some parts of Russia, a European exchange tells us, there exists a decided feeling against foreigners; or one is nearer the truth in saying that the Russians hate strangers, and with the dim idea they have of what is right and what is wrong, they consider it their duty to persecute them as much as ever lies in their power. Cunning and intrigue seeming to form their character, they can no doubt do a great deal of harm to any one coming down here who is unprepared, and not knowing what sort of people they are.

In the end of 1882 a wood-exporting firm in Finland made an agreement with a Count v. M., in St. Petersburg, who was the owner of a large estate with extensive forests in this neighborhood, to take out the value of the woods for joint account. The forests contained about a million of trees, ripe for cutting, and these were to be made into money in as short a time as possible. Plans were made; a saw-mill with six frames and a planing mill were to be built, and 80,000 trees were ordered to be felled the first year. The trees were felled, the saw-mill was built, workmen were collected from Sweden, Finland and Riga. Last summer the saw-mill was so far ready that sawing began, when the firm in Finland unexpectedly came into difficulties. Money was not sent to pay the workmen. Some time after the firm in Finland was made bankrupt, and the owner left for America. The Count v. M. stopped payment in the real sense of the word, and there the poor workmen were left with their wives and children in utter want of money, in an exceedingly dangerous climate, where fever and illness came more more regularly than the daily bread, without means to buy medicine and without a medical man to attend them. Death visited them through typhus, and they had to bury their dead themselves, the Roman Catholic clergyman asking an impossible price to read the service.

To tell of all the intrigues, all the unfulfilled promises, and the mean behavior on the side of the Russians against these poor people would be of no use. Suffice it to say that by their mutual efforts they got over the first part of the winter, and now, through the help of the Swedish Ambassador and the Finnish authorities in St. Petersburg, they were sent home to their respective countries, penniless. The business is entirely wound up, and the very fine saw-mill with its first-rate machinery and every new improvement, is standing waiting for a new owner who may have sufficient means to make himself independent of Russian intrigues, and be able to continue a business which began so hopefully a little more than a year ago. Strangers should not try their luck in Russia without being backed by people whom they thoroughly know and can have entire confidence in.—*Buffalo Lumber World.*

TREES IN THE SHETLAND ISLES.

Efforts have been made at various times in England to grow timber trees in the Shetland Islands, but the success which has so far attended these experiments is not very encouraging, certainly not sufficient to warrant any special effort in that direction. The plantation prospered in the beginning, being fenced in by high enclosures, but as soon as the trees grew above the fences, the cold and powerful gales blasted the larger number. The largest tree found is stated to be only three feet in circumference at the ground, while the tops are stunted. *Forestry* in an interesting account of the Island says:—"The prize plantations of Shetland are situated in a little valley, near Lerwick, whose Norse designation would sound strangely in southern ears, for Englishmen have forgotten the sound of their original language, though proud of their Scandinavian blood. On this spot there are two well-sheltered small groves, whose planter, Dr. Arthur Edmiston, received a premium adjudged by the Highland Society of Scotland in 1824, "for having planted the greatest number of trees on the largest extent of ground, between February 1st, 1822, and November 1st, 1824, of any proprietor or tenant, in Zetland." The writer then informs us that these groves are entirely of sycamore and adds rather humorously. 'I admired but did not measure the trees; they are probably as high as an undersized farm house, and equal in circumference to a beneficed clergyman —that is, considerably beyond the girth of a curate, and less than that of a grazier in good times.'"

A NEW BRANCH OF TRADE.

The Postmaster-General has issued a notice to the public calling attention to the spring season and the growing custom of sending flowers, &c., by post. He points out that in all cases these flowers should be securely packed in boxes or cases of wood, and that boxes of pasteboard should not be used, owing to the liability of the wet flowers to reduce them to soft pulp in transit.

For boxes connected with the growing business of the letter and parcel post, pasteboard, although unsuitable and much disliked by the authorities, occupies a prominent position. This place bids fair to be usurped by wood; but a new branch of box making should be started for the purpose; by this we mean that light wood boxes should be placed at the disposal of the Post Office authorities and the public at a price that would compete with pasteboard. Such boxes, in our opinion, should be made to fit one in another, and be of stock sizes, such as perfect cubes, ranging by half lengths into double or treble cubes.

It would, perhaps, not be impossible, as the postal and railway authorities are anxious to increase the parcels business, to arrange with them to sell boxes to the public, as such a movement could not fail to prove profitable to them and a boon to tradesmen and private individuals. Failing this, the servants might be permitted to sell such boxes to the public on an agreed commission.

Take the case of a person in a strange town wishing to send flowers or fruit to his family at a distance, he cannot do so because of the difficulty presented by the box. He goes into the market, where there are flowers and fruit galore; but he cannot purchase the necessary box. Again, take the private residents, they buy their flowers and fruit, and take them home, where they perforce remain, for they have no knowledge where to purchase a post-box, with which to send them to their friends. The same difficulty in some degree presents itself to the tradesman.

If post offices, parcels offices, railway parcel offices, or receiving offices were the depots of these wooden envelopes, the difficulty would at once be removed, and a great and lasting trade would, no doubt, spring up in this department.

Failing this the tradesmen themselves might become the custodians of these parcel boxes, as also stationers or dealers in post envelopes. If such dealers were to place notices like the following before the public:—"Flowers, fruit, and other damageable goods packed here and sent by post"—we have no doubt they would do a lucrative business.

To us it occurs that this box trade is a natural outgrowth of the development of the postal system in the direction of parcels. Compared with pasteboard, there is no reson why wood should not be freely used; it is cheap, and has the advantage over pasteboard of being more durable and being a favored material in every household, if for no other purpose than firewood.

As to the making of such parcel boxes, we can only suggest the free use of machinery. We believe it would be possible to dovetail the corners without adding to the cost of otherwise nailing them, and to lace or stitch them through the angles with soft wire.

Softened wire, such as that used in bottling aerated waters, might be freely used in connection with these boxes.——*Timber Trades Journal.*

Wooden Pavements.

It seems that European countries are experimenting with wood pavements. For instance, in France we are told that the wooden pavements laid down last winter by an English company and English workmen in the Champ Elysees, Paris, has given such satisfaction that the system is now being applied to the Avenue de l'Opera. In addition to this a report reaches us from England that at a special meeting of town Council at Norwick, a report was received from the Wood Pavement Committee, recommending that certain streets, roads, etc., be paved with wood, and that application be made to the local Government Board for sanction to borrow a sum not exceeding £20,000 for carrying out the work. The amended scheme included a number of streets, covering 54,475 yards super, at an estimate of 7s. a yard; total, £18,766 5s. After lengthy discussion, an amendment that further consideration be deferred for a month in order to ascertain the cost of maintaining the roads and streets during the past two years, for comparison with the probable cost of the same when paved with wood, was agreed to.

The Southern Bald Cypress.

The southern bald cypress is a remarkable tree in many respects. It is perfectly hardy at the north, and, although a conifer is not evergreen. The branches look peculiarly dead until late in the spring, not showing signs of life until most other trees are putting out leaves. In summer it is as beautiful as it is odd in winter. The tree often attains a great size and age. A section of a trunk in the botanic gardens at Cambridge shows the tree to have been 545 years old. The largest tree of the species known is in girth larger than the largest redwoods in California. It is only 120 feet high, however.

A Large Apple Tree.

On the farm of Delos Hotchkiss, Marion, Conn., is an apple tree, the largest we ever heard of. H. C. Hovey gives its measurement in the *Scientific American* as follows:—"Circumference near the ground, 15 feet 3 inches; at the fork, 16 feet 2 inchrs; height of tree top, 104 feet. A peculiarity of this tree is, that five limbs have borne oue year and four limbs the next. The usual yield from five limbs is about 85 bushels, and the four limbs vary from 35 to 40 bushels. The age of this venerable tree is estimated at from 175 to 180 years."

THE WEATHER IN SWEDEN.

STOCKHOLM, March 8th, 84.—The weather of the last 14 days in the north of Sweden has been more seasonable than heretofore this winter. This circumstance, in conjunction with the comparative absence of snow, has strengthened the ice at the entrance to the various timber ports in a marked degree; so much so, in fact, that the opening of navigation will be considerably retarded. It is yet too early to express a decided opinion as to when the lower Gulf ports may be expected to be clear of ice, but should we have cold weather up to the 20th current, then first open water cannot fail to be late.

The scarcity of snow in the timber regions supplying the lower ports is at length interfering with the getting of logs. Up to the present, however, I do not consider that the want of snow has been nearly so much felt, as far as the driving out of logs is concerned, as some of my friends would have me believe. On the contrary, the absence of an excess of snow in the high lands of Dalecarlia and Herjedalen, as well as some other districts, has more than counterbalanced any inconvenience experienced through the want of it. After this date the scarcity of snow may be expected to make itself felt, not only in the getting of logs, but, what is more, in the probability of there being insufficient floating water the ensuing spring. There is yet time to change all this, but should we not be favored with either a heavy fall of snow at an early date, or with a wet spring and summer, a partial failure in floating is quite on the cards. With the waterways almost bare of logs, the result of the excellent floating weather of the last two season, the bare possibility of even a partial failure of the floating operations will constrain more than one importer to cover some of his wants.

SQUARE TIMBER.

The Ottawa *Citizen* contains the following letter:

SIR,—I am an old stevedore, and for more than 40 years loaded ships with square timber at Quebec and elsewhere. Having been at the C. P. R. station several times lately when trains loaded with white pine, owned by Messrs. R. H. Clok & Co., were lying there, and feeling some interest in such matters, I have examined the timber, and after doing so I cannot refrain from giving publicity to the result of my examinations. The timber is without exception the best I have ever seen, and the gentlemen who own it deserve credit for the admirable manner in which they have had it made. It will average as near as I can judge, 78 or 80 feet and is all butted—in fact ready to be loaded into the vessels, and comes from Widow River near Lake Nipissing. Owing to the many facilities afforded by the C. P. R., the three or four hundred car loads that are to come will be at Papineauville to go thence to Quebec on the opening of navigation. I thank you, sir, for the use of your valuable paper,

THOS. O'NEILL.

Ottawa, March 27th, 1884.

Wood *v.* Asphalte.

At the fortnightly meeting of the Commissioners of Sewers, held at Guildhall recently, Mr. Altman brought up a report from the Streets Committee relative to the paving of Houndsditch and cutler street, and stating that having considered the memorial referred from the last court in favor of paving the said places with wood, they adhere to their recommendation that the said places should be paved with asphalte (estimated cost about £3,127). He said, after reconsideration, the committee had come to an almost unanimous opinion that Houndsditch would be better paved with asphalte than with wood.

Mr. Philips thought it was almost agreed at the last court that Houndsditch should be paved with wood in accordance with the wishes of the deputation from the ward. He asked whether it was right to push down the throats of 84 men living in that street this villanous asphalte. (Laughter.) It was the most confounded muck that ever was laid down. (Laughter.)

Mr. Deputy East moved to strike out the word "asphalte," and substitute the word "wood." (Hear, hear.) He admitted that the committee had listened with great attention to what he had said on the subject, but the fact remained that only one gentleman in Houndsditch was in favor of asphalte. ("Name." Mr. Hopkins. (Laughter.) He thought such a strong feeling on the part of the ratepayers ought to be considered by the Commission.

Mr. E. Bell seconded the amendment, and complained that the petitioners had not been asked to attend the committee, who, he thought would have convinced them of the desirability of aving the street with wood.

The chairman replied that there had been no discourtesy to the petitioners. The Clerk had adopted the usual course, and had written to the first gentleman whose name appeared on the petition, Mr. Defries.

After an animated discussion the amendment, on being put, was lost, and the report agreed to. —*Timber Trades Journal.*

Black Gum.

A gentleman just returned from New York says he noticed there a very pretty furniture wood, of a greenish color, close grain, with here and there a streak of old gold running through it, and asked its name. He was told that it was olive wood, he asked further questions and was finally told that that the olive wood is made of black gum brought from southern swamps. The manufacturers claim for it a beauty of fibre and of polish, and a cheapness, which makes it one of the best known woods for the manufacture of furniture. Now, as this southern country abounds in black gum, here is a source of wealth not before noted. Day by day such discoveries are made. The new uses of magnolia wood in making shooks have been commented upon. Southern ash also has quite a run in the handle factories recently established. In very truth, southern forests offer extra inducements to manufacturers, and no doubt this fact will very soon find its way into the brains of northern capitalists.—*American Lumberman.*

Building Exhibition.

The 5th annual building exhibition which opened at Islington, London, Eng., on the 24th ult., closed on April 5th. Speaking of it, the *Timber Trades Journal* says:

"The value of these exhibitions and their beneficial effect on the trades interested in them cannot be over-estimated. They form a ready means of bringing manufacturers and buyers into communication, and they are interesting as showing the improvements introduced in the manufacture of the materials employed for the exterior and interior embelishment of buildings.

Sanitary science has received great attention in recent years, and the most approved methods for rendering our homes free from impure air was a leading feature in this exhibition.

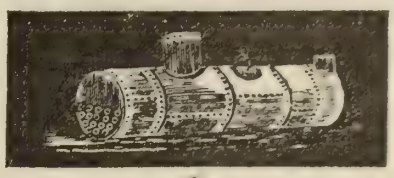
Force of Wind Storms.

A striking proof of the force of the wind storms in December and January last was afforded in the 2nd week in March at the annual sale of timber on the Clumber-Park and Worksop Manor estates of the Duke of Newcastle. The catalogue contained no fewer than 67 lots, which included 2,613 trees which had been uprooted in Clumber Park, and 673 trees and 159 poles blown down in Worksop Manor. Among these were between 600 and 700 oaks, many of noble dimensions. No previous storm has ever proved so destructive in this district.

Advice to Mothers.

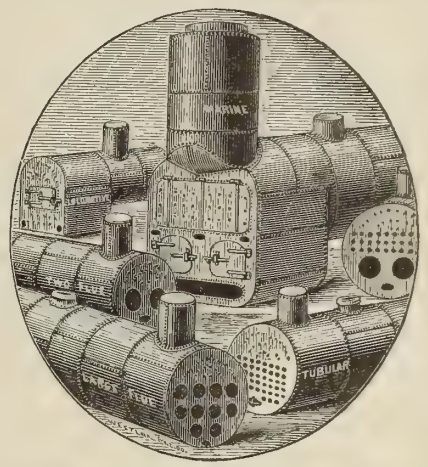
Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain and cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup for children teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentery and diarrhoea, regulates the stomach and bowels, cures wind, colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system, Mrs. Winslow's Soothing Syrup for children teething is pleasant to the taste, and is the perscription of one of the oldest and best female nurses and physicians in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

The American Hotel,
BARRIE, ONT.
Collier St., Adjoining Market.
RATES REASONABLE, CENTRAL LOCATION, FREE BUS TO AND FROM ALL TRAINS.
☞ Every accommodation for Commercial and LUMBERMEN.
1Ltf W. D. McDONALD, Proprietor.



(*ESTABLISHED 1852.*)
CURRIE BOILER WORKS
MANUFACTURERS OF
Steam Boilers
NEW and SECOND HAND ENGINES
and other Machinery on hand and for Sale.
CURRIE, MARTIN & Co.
Esplanade, Foot of Frederick Street, TORONTO.
2Ly

JOHN McGREGOR & SONS
Manufacturers of all kinds of STATIONARY, MARINE and LOCOMOTIVE



BOILERS
And SHEET IRON WORK.
SECOND-HAND MACHINERY Bought, Sold or taken in exchange for new work. ☞REPAIRS PROMPTLY ATTENDED TO. All Boilers Tested by cold water pressure to 150 pounds to the square inch.
DOCK and WORKS:—
Sandwich Street, Windsor, Ont.
2Ltf

GRATEFUL—COMFORTING.
EPPS'S COCOA
BREAKFAST.
"By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well-selected Cocoa, Mr. Epps has provided our breakfast tables with a delicately flavored beverage which may save us many heavy doctors' bills. It is by the judicious use of such articles of diet that a constitution may be gradually built up until strong enough to resist every tendency to disease. Hundreds of subtle maladies are floating around us ready to attack wherever there is a weak point. We may escape many a fatal shaft by keeping ourselves well fortified with pure blood and a properly nourished frame."—*Civil Service Gazette.*
Made simply with boiling water or milk. Sold only in packets by Grocers, labelled thus:
JAMES EPPS & Co., Homœopathic Chemists,
1yl21 London, England.

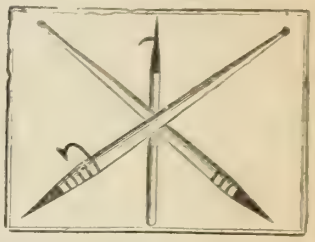
GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Augusta, Maine.

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Commission, Shipping, Forwarding and General Agent.
LUMBER MERCHANT
Office, Tempest's Block, Port Hope. 1Ll

J. K. POST & CO.
LUMBER MERCHANTS
And Shipping Agents.
OSWEGO, N.Y. 1Lt

HLLOCK & KENT,
Wholesale and Retail Dealer in
Pine and Hardwood Lumber, Lath, Shingles Veneers, Wave Mouldings & Fancy Woods.
103 Albert Street, TORONTO.
27L22

WM. AHEARN
MANUFACTURER OF
HAND SPIKES



CANT DOGS
Lumberman's Tools, etc.,
HIGHEST AWARDS IN CANADA and U.S.
L20-1y CHAUDIERE, OTTAWA.

DO YOU WANT

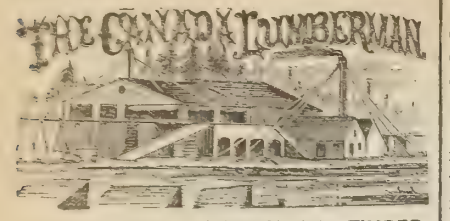


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"FARMS FOR SALE" AND "FARMS WANTED"
In the
DAILY AND WEEKLY MAIL
THE MAIL has become
The Recognized Medium for Farm Advertisements
And contains more of them than all other Canadian papers combined. It has 350,000 readers of the right class. ADVERTISEMENTS of "Farms for Sale" and "Farms Wanted," "Stock" or "Seed for Sale" or "Wanted" inserted in THE WEEKLY MAIL, *five cents* per word each insertion, or *twenty cents* per word for *five insertions*, or in THE DAILY MAIL at *two and a half cents* per word each insertion.
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A PRIZE. Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All, of either sex, from first hour. The broad road to fortune opens before the workers, absolutely sure. Address TRUE & Co., Augusta, Maine.



HILL'S
English Extract of
BUCHU,
One of the Best
KIDNEY
INVESTIGATORS IN USE.
It is a specific in the cure of all diseases of the Kidneys, Bladder, Prostatic Portion of the Urinary Organs, Irritation of the Neck of the Bladder, Burning Urine, Gleet, Gonorrhea in all its stages, Mucous Discharges, Congestion of the Kidneys, Brick-dust Deposit, Diabetes, Inflammation of the Kidneys and Bladder, Dropsy of the Kidneys, Acid Urine, Bloody Urine, Pain in the Region of the Bladder, PAIN IN THE BACK, Urinary Calculus, Renal Calculus, Renal Colic, Retention of Urine, Frequent Urination, Gravel in all its forms, Inability to retain the Water, particularly in persons advanced in life. IT IS A KIDNEY INVESTIGATOR that restores the Urine to its natural color, removes the acid and burning, and the effect of the excessive use of intoxicating drink.
PRICE, $1; or, Six Bottles for $5.
☞ Send for Circular. Sold by all Druggists.
W. JOHNSTON & CO.,
161 Jefferson Ave., DETROIT, MICH.



DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY THE
Peterborough Review Printing and Publishing Company (Limited), Peterborough, Ont.

Terms of Subscription:

One copy, one year, in advance	$2 00
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Per line, for six months	50
Per line, for three months	30
Per line, for first insertion	10
Per line, for each subsequent insertion to 3 mo's.	05
Cards not occupying more than 12 lines (1 inch) per annum	8 00
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Special rates will be made for page, half page and column advertisements.

Advertisements intended for insertion in any particular issue should reach the office of publication at least four clear days before the day of publication, to insure insertion

All communications, orders and remittances should be addressed and made payable to THE PETERBOROUGH REVIEW PRINTING AND PUBLISHING COMPANY (LIMITED), Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DRACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., APRIL 15, 1884.

THE yield of lumber in the Maine and New Brunswick districts this year is 268 million feet less than last year.

IN the Mississippi river district of the Northwest, 231 mills—consisting of 91 gangs and 140 circulars—cut 1,290,000,000 feet of lumber in 1883. This averages 5,365,000 feet for each circular, and 5,798,000 feet for each gang for the year.

THE Messrs. Klock are daily shipping large trains of lumber south frrm Pembroke, of what is said to be a very fine cut, and according to those who have seen it as clean, well made and large stuff as can be found in the market, and has never been under water.

THE Midland *Free Press* under the head of "McLeod & Cameron's Mill," says the boom at Sunnyside mill has commenced. They are cutting a large bill of timber 12 by 12, 30 feet long furnished by the Ontario Lumber Co. for the Canada Pacific Railway.

THE Hamilton *Spectator* says:—The opposition to the cedar block scheme is being gradually dissipated, as the estimated cost of the pavement becomes known. The introduction of block pavement will be particularly welcome to dry goods merchants, who now lose more in a week from dust than they will be required to pay in a year for the pavement.

THERE appears to be a great unanimity of opinion in regard to the indications for a building boom in the east. Albany, New York, Philadelphia and other lumber distributing centres are all expecting unwonted activity in the near future, their expectations being based on real, tangible reasons, rather than suppositions. Inquiries are already coming in, and contracts for extensive building improvements are being made on a scale of magnitude not hitherto equalled. The same indications are noticeable in Buffalo; and eastern dealers are already beginning to stock up, preparatory to the commencement of operations, and to be in readiness to meet the demand which is anticipated.

ACCORDING to Joshlin, fishes have been caught at depths where they must have sustained a pressure of eighty tons to each square foot of their bodies.

AMONG other satisfactory signs of the growing interest in, and more intelligent treatment of, the important subject of the preservation of our forests, is the legislation by the Dominion Government for the maintenance of a forest belt at the foot of the Rocky Mountains.

A COMMITTEE has been appointed by the Royal Society of London to collect the various accounts of the Krakatoa volcanic eruption and attendant phenomena. This committee may be able to prove or disprove the theory that the red sunrise and sunsets have been caused by volcanic dust.

THE benefits of manufacturing enterprises are beautifully illustrated in the case of Owosso, in the State of Michigan. Five years ago she gave a bonus for a manufactory, and now, although devoid of water transportation, she has twenty different kinds of enterprises of the character alluded to, and during that time they have increased her population over 2,000 souls.

AT a recent meeting of the American Society of Civil Engineers, F. L. Griswold described a chimney 160 feet high, which had been erected for a cotton factory in Mexico, and which has been in use for over twelve years. It is built of apparently sun-dried bricks, 10x3x7, by the Indians; is very symmetrical and well made, and seems to be now in good condition.

The Parry Sound *North Star* says:—A prominent timber dealer of Essex county says that there cannot be found a car load of square oak timber in the county for sale. He also says that the elm, of which the county a few years ago had abundance, is being rapidly manufactured into staves, and in the course of two or three years will be as hard to get as the hardwood is now.

NICOLET.

To the Editor of the Canada Lumberman.

GENTLEMEN,—Inclosed please find $2.00 in payment of my subscription to the CANADA LUMBERMAN up to Jan. 1884.

There will be about 20 million feet of hemlock and spruce cut this year at Nicolet, specially by M. M. Ball, McCaffrey and O'Shaughnessey's mills. The operations will commence about the first of May next.

Yours truly,
GEO. BALL.

Nicolet, March 27th, 1884.

USE AND CONSTRUCTION OF CRANES.

At the meeting of the Society of Arts, Institute of Technology, last evening, President F. A. Walker in the chair, a paper was read by Henry R. Towne, of Samford, Conn., on the subject of "Cranes; their Constitution and Uses." He illustrated by means of 50 lantern slides the various forms of cranes in use in this country and Europe and the respective adaptations for hoisting and locomation. The distinctions between jib cranes and derrick cranes were pointed out, and mathematical estimates were given for the requisite ratio of strength required in the masts booms and jibs to resist perpendicular and lateral strains. In the line of cranes attacked to cars the lecturer illustrated a very ingenious German contrivance for counteracting the weight of the suspended load by means of a movable weight, the leverage of which is automatically lengthened or shortened according to the perpendicular strain of the load. The power travelling cranes in use in locomotive works in Pennsylvania, are among the most elaborate and advanced contrivance in this line; a single derrick, by means of lateral and longitudinal rails for transfer, being capable of picking up a locomotive in any part of a large building and transfering it to any other. The lecturer stated that cranes have not yet been utilized in this country to the extent that they have abroad, particularly in Holland and Germany. He claimed that in many cases the cost of using cranes is scarcely ten per cent. of what hand power would cost for the work done; while in many others the cranes are absolutely necessary, and the cost of manual power cannot enter into the consideration.—*Boston Journal.*

PUBLIC SAFETY IN THE USE OF STEAM ENGINES.

The following bill to provide for the public safety in the use of steam engines was passed to be engrossed by the Massachusetts senate:

Section 1. The inpector of buildings of the city of Boston and such persons as the aldermen of other cities and the selectmen of towns may appoint therefor, may issue certificates of qualification, to run for the term of three years from their date, to persons to have charge of a steam engine or steam boiler in such city or town.

Section 2. On the application of any person and the payment of the sum of $2 the officers authorized to issue such certificate shall designate two competent persons to act as experts and make an examination of the applicant with reference to his qualifications for such charge, and on the favorable report of said experts may issue the certificate. If the report shall be unfavorable the fee shall be returned to the applicant.

Section 3. Any owner of, or person using a steam engine or steam boiler, who shall employ any person not possessing such certificate to have charge of such engine or boiler, shall be punished by a fine not exceeding $100. But such person may have his license suspended or revoked by the authority granting the same, upon satisfactory proof being given, and upon conviction thereof, of negligence, unskilfulness, or intemperance. The person or persons making complaint in any case shall subscribe the same and shall testify under oath.

Section 4. Engineers employed upon any vessel propelled by steam, and holding a license under authority of the United States, or any other treaty-making power, or persons having charge of boilers used for heating dwelling houses, or for cooking or steaming food or fodder, shall be exempt from the provisions of this act.

Section 5. Owners or lessees of stationary steam engines or steam boilers complying with the provisions of this act shall not be held responsible to any person suffering loss or damage by reason of neglect or incompetency on the part of said licensee.

THE FLOODS ON THE SAGINAW RIVER AND THEIR CAUSE.

The recent floods on the Saginaw river which has been higher than ever before known, furnishes food for reflection, and has raised the question as to the cause. The waters have poured down the tributary streams with resistless fury, the Tittabawassee being one of the principal feeders, until the Saginaw has swollen to unnatural proportions, and spread over the low lands around the Saginaws and between those cities and Bay City, until it resembles one vast lake. It has also flooded the sewers at East Saginaw, and set the water back until the basements have been filled, and the inmates driven from them. It has even necessitated the removal of perishable goods from the first stories of the business blocks adjacent to the river to save them from destruction, and the wooden pavements on some of the streets were necessarily weighted with lumber and iron to prevent them floating from their foundations. The docks not only at Saginaw, but for ten miles north have been overflowed, and thousands of barrels of salt piled thereon suffered destruction. Each succeeding year when the melting of the snows in the swamps is accompanied by heavy warm rains, without the usual nightly frosts these freshets are becoming higher and more destructive; and inquiry as to the cause develops the fact that practical, thoughtful men are reaching the conclusion that it is measureably at least, the result of the destruction or removal of the the timber along the banks of the Tittabawassee, Shiawassee, Salt, Chippewa, Tobacco and other tributary streams. Large tracts of the land adjacent to these streams are not only being denuded of their timber for lumber, but are being converted into farms and devoted to agriculture. This to be successful necessitates drainage, which gives uninterrupted and speedy passage of the water which was formly held back by the timber until its simultaneous discharge into the Saginaw floods it beyond its capacity to carry it to Lake Huron, flooding its banks and spreading over the adjacent low territory, increasing year by year until it is a question of serious consideration as to the future. To add to the difficulty, the annual discharge of decaying vegetable matter by the Tittabawassee and other streams find lodgment in the bed of the Saginaw, raising the same, and thereby constantly decreasing the outlet; and notwithstanding the vast outlay which has been expended for dredging, the difficulty has been constantly on the increase, until the bars at Carrollton and other points have made them impassable barriers for the larger class of loaded lumber and salt carriers during the summer months.

Considering the fact that more lumber and salt leaves the Saginaw river annually than any other stream on the continent, this question is one of serious and momentous importance not only to the citizens of the enterprising cities on its banks but to the country at large. And when the fact is taken into consideration that the rapid settlement and development of the country which is taking place, will annually increase the difficulty, providing the causes assigned are tangible, and susceptible of substantiation, as we believe they undoubtedly are, it behooves not only those personally interested but the government to seek a remedy before an unexampled flood shall spread havoc and destruction in its path, which will cost millions of dollars, and perhaps hundreds of lives. Whatever the remedy may be, we are firm in the conviction that the causes assigned are the real explanation of the difficulty, and that to the denudation of the timber to the south and west, we may unhesitatingly attribute the annually increasing floods on the Saginaw.—*Bay City Lumberman's Gazette.*

OTTAWA NOTES.

Messrs. Proctor & Co., of Ogdenburg, N. Y., have purchased Messrs. McLachlin Bros., coming summer's cut of lumber for the United States market.

About 200 men are employed at the Booth yards in Hull repairing barges.

Messrs. Kirby & Bangs' barges are nearing completion and will be ready for the water next month.

A contemporary stated that nearly all Messrs. Perley & Pattee and J. R. Booth's lumber would be shipped by rail hereafter. This is incorrect. Their Boston lumber, of course, has to go by the Canada Atlantic, but New York, Whitehall, Burlington, Montreal and Quebec goes by boats. Out of 500,000,000 feet shipped last season from this district only 124 of it went by rail.

Rumour has it that Mr. Grier, of Montreal, is now in England working up a syndicate with a capital of $2,000,000 to stock Mr. E. B. Eddy's business. Three or four lumbermen from this district have signified their willingness to subscribe $100,000 each if Mr. Grier is successful.

A bill will shortly be brought before Congress repealing the tonnage dues on American canal boats. This will effect a saving to those boats carrying Canadian lumber to the extent of from $15,000 to $20,000 yearly.

Freights this season will open at $1.10 to $1.15 to Montreal, $1.85 to $2.00 to Burlington, $2.00 to $2.10 to Whitehall, $3.50 to New York, $3.50 to Albany, $1.75 to Quebec.

The wages of barge crews will be the same as last year.

Mr. Geo. W. McCullough has been appointed Ottawa agent for the Northern Boatmen's Transportation Company.

Two large scows are being built in the canal basin. Five of George A. Harris' barges and two steamers are undergoing repairs in the basin, opposite Easton's sheds.—*Ottawa Citizen.*

AMERICAN FORESTRY CONGRESS

The following circular letter has been sent out by the American Forestry Congress:—

DEAR SIR,—The Executive Committee of this Association has deemed it advisable to call a

general meeting to be held at Washington, D. C., on May 7th, at 10 o'clock, a. m., in the rooms of the Department of Agriculture, at which your presence is requested.

Time and place have been chosen contrary to precedent, in order to find an opportunity of calling attention by our active work, and impressing upon Congress then assembled, the needs and requirements of forestry in this country.

It is therefore desirable, that such meeting should be well attended, and no individual effort should be spared by the members and *friends* of this Association, and its aims to make the same particularly interesting and effective.

The following subjects have been selected as leading topics of discussion, referees having been appointed to prepare papers in regard to them :

1. Value of American timberlands.
2. Management of timberlands and timber in Canada, and legislation thereon.
3. Value and management of Government timberlands.
4. Best method of planting trees on unoccupied Government lands.
5. Influence of forests on climate and health.
6. Insects injurious to trees. Causes and dangers of their excessive multiplication, and how to meet them in their wholesale ravages.
7. Growing forests from seed by farmers.
8. Preservation of forests on head waters of streams.
9. Planting of trees by railroad companies.
10. Irrigation in connection with tree planting.
11. Experiment stations and forest schools.
12. How can we best promote the interest in, and knowledge of, forestry among all classes of this country ?

Your participation in the discussion of these subjects, and other papers of interest are solicited ; abstracts of these must be sent to the Secretary for classification two weeks before the meeting.

Particulars of arrangements will be made known in due time.

Please notify as soon as convenient, whether you are likely to be present at this meeting.

B. E. FERNOW,
Corresponding Secretary.

New York, March, 1884. 9 Pine Street.

Fierce Forest Fires.

RALEIGH, N. C., April 4.—The greatest fire ever known in North Carolina broke out on Wednesday, and swept through the vast forests of yellow pine, which stretch from Stanford, 50 miles from Raleigh, to points north, west and south for 60 miles in South Carolina. The fire was caused by burning brush. Large masses of fire were actually forced through the air by the sweeping gale, and tops of half grown pines were thrown great distances. The flames towered to an amazing height. At Blues Crossing and Keyser the people gathered in large numbers and fought the flames with desperation. A dozen turpentine distilleries were destroyed, as well as large quantities of resin, turpentine, and other naval stores. Many persons lost their clothing, and some were badly scorched. The town of Manly was in evident danger of destruction. The railroad warehouse caught fire several times. The Methodist church, five guano and cotton warehouses, and the town guard house were burned at two o'clock yesterday morning. Hamlet was surrounded by fire, and many farm houses have been consumed, but no loss of life has been reported. For ten miles east of Hamlet everything is destroyed.

Killed by a Log.

LUCAN, April 3.—Mr. W. N. Hodgins, a farmer residing on the third concession of Biddulph, one mile and a half from Lucan, father-in-law of Mr. J. W. Orme, of the Lucan *Enterprise*, was engaged to-day skidding some logs in the woods, assisted by his son, when one of the logs accidently rolled upon him, and remained there until drawn off with the team by the boy. The unfortunate man's ribs were crushed into his lungs, and he was otherwise internally injured in such a manner that his life is despaired of.

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, March 25, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., N. W., Washington, D. C. :—

295,223.—Borer hand—W. E. Clough, assignor of one half to P. Pethick, concord, N. H.

295,524.—Boring machine—W. E. Clough, assignor of one-half to P. Pethick, Concord, N. H.

295,589.—Cabinet-makers clamp—W. E. Sheldon, jr., Medford, Mass.

295,628.—Chuck lathe—J. S. Gilmore, Philadelphia, Pa.

295,536.—Gearing for changing speed—S. N. Gallup, Macedon, N. Y.

295,549.—Log turner—S. T. Haviland, Jamison, Ala.

295,726.—Mouldings, machine for dressing—J. C. Brandon, Detroit, Mich.

295,515.—Nailing machine—E. F. Barton, Ravenna, Ohio.

295,610.—Pavement wood—R. Albrecht, Tilsit, Prussia, Germany.

295,792.—Saw guide—T. J. Neacy, Milwaukee, Wis.

295,791.—Saw mill—D. F. & J. T. Milne, Rochester, N. Y., and Clay City, Kansas.

295,572.—Saw mill head block—V. Martin, & C. W. Metcalf, said Martin assignor to W. J. Graham, Hopkinsville, Ky.

295,649.—Saw tooth—R. W. Kellen, Albion, Cal.

295,833.—Screw wood—G. A. Stiles, West Gardener, Mass.

295,722.—Shingle sawing machine—S. L. Bitting, Big Creek, Miss.

295,541.—Shingle shaving machine—A. Gould, Bangor, Me.

295,793.—Wooden tubing, smoothing the inner surface of—M. F. Wilcox, Bay City, Michigan.

PATENTS ISSUED APRIL, 1.

295,091.—Barrels, manufacture of—G. B. Washburn, Minneapolis, Minn.

295,933.—Box-trimming machine, packing—F. Myers, New York, N. Y.

295,922.—Handle attaching device for tools—J. R. Hood, Philadelphia, Pa.

296,268.—Machine brace—S. Beal, Elmyria, Ohio.

296,207.—Plane, joiners'—G. D. Moshier, & W. H. Ford, Birmingham, Conn.

296,270.—Plane, bench—A. Fales, Denver, Col.

295,967.—Saw—J. D. Abbott, assignor of one-third to A. M. R. Fitzsimmons and J. W. Chapman, Reading, Mich.

295,964.—Saw guide—W. Williams, Lumberton, N. C.

295,991.—Saw mill circular—C. Esplin, Minneapolis Minn.

296,220.—Saw mill, portable—W. C. Rodgers, Owlet Green, Texas.

296,241.—Saw, pruning—W. K. Stansbury, Middletown, N. H.

296,128.—Saw vice—G. W. Burton, Bordertown, N. J.

296,077.—Woodworking-machine knife—S. J. Shimer, Milton, Pa.

More Forest Fires.

RALEIGH, April 5.—The fire in the turpentine forests is nearly under control, save near Fayetteville. East of there it is spreading. An immense amount of damage has been done. The house of N. C. Nott was burned yesterday ; the family barely escaped. At Broadway two churches, a foundry, and a number of houses were burned. At Lemon Springs many families are homeless. The turpentine business in large portions of five or six counties is said to be ruined.

COLUMBIA, S. C., April 5.—Forest fires are raging in many sections of the State, originating in farmers burning the brush to clear the planting grounds. Near Killian's station a distance of twenty miles has been swept, burning houses, mills, barns and fences. Jones and Killian lost their mills and 400 barrels of rosin. Many people have been rendered homeless by the fires.

The forest fires continue with destructive effect in Lexington, Kershaw, Sumter, Colleton and Chesterfield counties. Near Georges' station several large houses, barns, and outbuildings containing prouisions have been destroyed. The flames are rapidly approaching this village. In the northern part of Sumter county a number of late plansations have been burned over and many negro cabins with a year's supplies destroyed.

A Useful Instrument.

A useful instrument, which will doubtless become a necessity in certain lines of manufacturing, is being introduced in England. An electric system is established throughout a factory, which through the agency of an indicator placed in the office, shows at a glance whether the different looms or machines in the building are in operation.

Canada Lead & Saw Works,
JAMES ROBERTSON,
Metal Merchant and Manufacturer,
OFFICE: 20 Wellington St., MONTREAL, P.O. Box 1500.
White Leads, Putty, Shot. Also, Gang, Circular, and Cross-Cut Saws of all kinds. Prices furnished on application.
BRANCHES : { TORONTO, Jas. Robertson & Co. / ST. JOHN, N.B., James Robertson.
1yL8

WM. LATCH
Wholesale Dealer in All Kinds of
PINE and HARDWOOD LUMBER
SHINGLES AND LATH.
CONSIGNMENTS BOUGHT AND SOLD ON COMMISSION.
26 Adelaide St. East, TORONTO, ONT.
24L4

WATER POWER
TO LEASE
THE UNDERSIGNED having largely extended their raceway at Lakefield, are desirous of corresponding with parties who wish to go into manufacturing, and they are prepared to sell or lease water power on the most favorable terms, or would erect buildings of any size suitable for factories.
R. & G. STRICKLAND
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NOTICE.

SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Indian Supplies," will be received at this office up to noon of THURSDAY, 1st MAY, 1884, for the delivery of the usual Indian Supplies, duty paid, in Manitoba and the North-West Territories, consisting of Flour, Bacon, Groceries, Ammunition, Twine, Oxen, Cows, Bulls, Agricultural Implements, Tools, &c.

Forms of Tender and full particulars relative to the Supplies can be had by applying to the undersigned, or to the Commissioner of Indian Affairs at Regina, or to the Indian Office Winnipeg.

Parties may tender for each description of goods separately or for all the goods called for in the Schedules.

Each tender must be accompanied by an accepted Cheque of a Canadian Bank, for at least five per cent. of the amount of the tenders for Manitoba, and ten per cent. of the amount of the tenders for the North-West Territories, which will be forfeited if the party tendering declines to enter into a contract when called upon to do so, or if he fails to complete the work contracted for. If the tender be not accepted the cheque will be returned.

Tenderers are required to make up and attach to their tender the total money value of the goods they offer to supply, or their tender will not be entertained.

The Tender for Beef must be a separate tender ; if it includes any other article it will not be considered.

The lowest or any tender not necessarily accepted.

[No newspaper to insert without special authority from this Department through the Queen's Printer.]

L. VANKOUGHNET,
Deputy of the Superintendent General of Indian Affairs.

DEPARTMENT OF INDIAN AFFAIRS,
OTTAWA, 19th March, 1884.


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THE NORTHWEST CUT.

We learn that during the year there was an increase of 78 in the number of establishments, and an increase of 102 in the number of saws in use. We also learn that this increase has been in the upper peninsula of Michigan, and in the States of Wisconsin and Minnesota, in which regions the census reports locate 53 of 82 billion feet accredited to the Northwest, and that the other or older sections of the pine regions show an actual decrease in the number of establishments and in the number of saws.

In regard to the cut of the various districts, if we take what is known as the west of Chicago district, and add to it the Green Bay district, which belongs to the three pine regions enumerated above, we will have for a series of years a total output as follows: 2,578 million feet in 1880, against 2,987 million, an increase of 409 million in 1881; against 3,549 million, an increase of 562 million in 1882, and 3,821 million, an increase of 272 million in 1883. Deducting the Green Bay district from the cut of the lower peninsula of Michigan, this portion of the state shows a decline in the amount cut in 1883 of 25 million feet as compared with 1882, against an increase of 122 million feet in 1882 over the cut of 1881. The returns from the lower peninsula are not all reported, but will probably show a heavier decline.

The increase may be attributed to the extension of the railway lines and feeders into the pine forests, as three railroads in Wisconsin, alone, show an increased cut of over 200 million feet, or 80 million feet more than the entire increase shown by the reports which, in 1882, covered 90 per cent of the entire cut.

The conclusion to be deduced from these reports is that the milling interest of the Northwest is gradually shifting its ground from lower Michigan into the newer forests of the upper peninsula, Wisconsin and Minnesota, which sections will furnish over one-half of the cut of 1883—considerably more than the entire cut of the Northwest for any year previous to 1879, and twice as much as cut in the same section in 1879.—*American Lumberman.*

AUSTRALIA.

We take the following from the monthly circular of Lord & Hughes, timber brokers, of Melbourne, dated 13th February, 1884:

Since our last on 16th ultimo, we have to report large arrivals of every description of lumber, timber and large offerings at auction, sales being fully up to expectations, and prices are not materially altered from those prevailing last month, although at last sales a marked improvement was visible in Baltic deals and flooring, whilst American white pine shelving was weaker in consequence of heavy arrivals, other descriptions of American lumber remaining about the same. Slates also show an improvement on last sales.

Trade from the yards continue active, there being no falling off for building purposes.

The arrivals have been—Zoila, from Christiana, with flooring; Gurli, from Umea, Topdahl, from Skutskar, Storken, from Gothenburg, with deals; Highlands and Hallgerder, from Canada, with spruce deals, boards, laths and pickets; Fleetwing, from Humboldt bay, with Oregon timber, laths and pickets; Henry S. Sanford and Paramita, from New York, Black Adder, from Boston, with clear pine, white pine shelving, doors, slates, laths and plaster; Drumblair, Sherwood, Kent, Star of Russia, Antiope, Sussex, Lock Katrine, Duke of Sutherland, Port Phillip, and Roman Empire, from Great Britain, with flooring, slates, and galvanized iron; Sydney, from Marseilles, with galvanised iron; Cheviot, Buninyong, Gabo, Nemesis, Leura, and Konoowarra, from Sydney, with cedar; Mercury, from Launceston, with slates; Victorian and South Australian, from Adelaide, with plaster and slates.

Red Deals.—Imports: 580 standard, from Baltic; 436 pieces, from Great Britain. The arrivals have been Gurli, from Umea; Topdahl, from Skutskar; Storken, from Gothenburg; and Lock Katrine, from Glasgow. On 8th inst., the cargo ex Tophdahl was sold by auction:—A Crown S brand 9x4, realising 6d.; 11x3, 6¼d. to 6 3-16d.; 9x3, 5¾d. to 5⅞d.; A+S. 9x4, 5⅞d. to 5 7-16d.; 11x3, 5 3-16d.; 9x3, 5¼d. to 5 3-16d. Sales have also been made during the month, ex Vanadis, Helene, Leto, and Concordia.

Spruce Deals.—Imports: 38,705 pieces. The arrivals since our last have been—Highlands, from St. John's; Hallgerder, from Quebec; Black Adder from Boston. Sales by auction have been confined to the cargoes ex Geraldine and Augusta, on 29th ult.; 11x3 realising 3 1-16d. to 2¾d., and 9x3, 3 1-16 to 3⅛d.

Oregon Timber.—Imports: 550,000 feet super. This parcel arrived in the Fleetwing, and has been sold privately. Sales by auction have been made of the cargoes ex Hesper and Martha, at prices ranging from £6 15s. 6d. to £6 2s. 6d., showing a still further decline on previous rates.

Lumber.—Imports: Clear pine, 847,568 feet super; white pine shelving, 858,430 feet super; T. and G. Ceiling, 36,416 feet super. The arrivals have been Henry S. Sanford, and Paramita, from New York; Hallgerder, from Quebec, and Black Adder, from Boston. The parcels ex H. S. Sanford were all sold at auction on the 29th ult., and on the 5th instant the shipment ex Paramita was offered, the clear pine being all sold, but only a portion of the shelving.

Pitch Pine.—Imports: Nil. Auction sales. Nil.

Redwood.—Imports: 330,938 feet super. This parcel arrived in the Remijio, from San Francisco, and was offered at auction on 29th ult., resulting in the quittance of about 200,000 feet, at £10 per 1,000 feet super.

Flooring and Weatherboards.—Imports: 2,574,704 feet lineal. The arrivals have been Zoila, from Christiania; Drumblair, Loch Katrine, and Roman Empire, from Great Britain. Sales by auction have been cargoes of Baltic flooring, ex Concordia and Juno and small parcels of spruce flooring, ex Augusta and Geraldine, from Canada. The following are prices realized:—Red, 6x1½, 11s. 4d. to 11s. 3d.; 6x⅞, 8s. 9d. to 8s. 6d.; 6x¾, 6s. to 5s. 6d.; 6x½, 4s. 9d. to 4s 8d.; 4-out weatherboards, 7s. 3d.; white, 6x1⅛, 9s., 6x⅞, 7s. 9d. to 7s. 6d.; 6x¾, 5s. 10d. to 5s. 6d.; 6x½, 4s. 7d. to 4s. 4d.; 4-out weatherboards, 6s. 9d. to 6s.

Kauri Pine.—Imports: Nil. Sales by auction comprise the cargo of flooring boards and flitches, ex Peerless; and flitches, ex Robbin Hood and Palace, the following being prices realised:—6x1½, 10s. 6d.; 6x1⅛, 10s.; 6x1, 8s. 9d. to 8s. 6d.; 6x⅞, 8s. 3d.; 4x1½, 9s. 6d.; 4x1¼, 9s. 3d.; 4x1⅛, 9s.; sawn flitches, 14s. to 14s. 3d.; hewn logs, at 11s. 9d.

Cedar.—Imports: 232,873 feet super. The arrivals have been various coasting steamers from Sydney. Sales by auction have been made of the cargo ex Lady Franklin, and parcels ex coasting steamers, prices ranging from 49s. to 21s. according to size and quality.

Red and White Pine (Colonial.)—Imports: Nil. Auction sales. Nil.

Doors.—Imports: 300. Auction sales.—Nil.

Laths and Pickets.—Imports: Laths, 4,528 bundles; pickets, 7,414 bundles.

Palings.—Auction sales.—18th January—ex Camilla, 5,000 5-feet palings, at 10s. per 100 8th February—ex Xema, 4,000 5-feet Palings, at 8s. 6d. per 100.

THE CULTURE OF WALNUT.

Mr. D. B. Wiser, of Lacon, Ill., gives in the *Prairie Farmer* his views on walnut planting as follows:

"The black walnut is, without doubt, the most valuable tree we have for rich lands of the corn belt West, and one which is very easily grown everywhere if the farmer will only learn how to get it started. How few we see growing on our prairies. Why? Simply because to have it we must grow it from the nuts. It is nearly impossible to plant black walnut trees of any size and have them live; although it is a fact that whenever a non-professional attempts to grow them from the nuts he is almost sure to fail, it is also a fact that there is no tree that is more easily grown from the seed than this, if we only know how to do it. It is my purpose in this article to tell how to do it, and also how not to do it.

"In the first instance we will suppose a man lives where he can gather the nuts in the woods. When the nuts begin to fall let him plough deeply the plat of ground he wishes to plant, and furrow it off three or four inches deep, the distance apart he wishes the rows to be. He will then go to the woods and gather what nuts he wishes to plant, and plant them at once, just as they come from the tree, covering them just out of sight in the furrows. This is all there is of it; simple, is it not? But it will not do to gather a great wagon box full, and let them stand in it until they heat, or to throw them in a great heap and let them lay there until they heat. It will not do, either, to hull them and let them lay in the sun a week or two, or hull them, dry them and keep them until spring, and then plant them; none of these plans will do if you want trees. Of course if the nuts are hulled and planted at once they will grow; but this hulling is entirely unnecessary. Besides, the hulls seem to act as a special manure for the young seedlings, causing them to grow more vigorously.

"Next, we will suppose one wishes to plant walnuts where they cannot be had from the woods, but must be shipped in. There seems to be only one plan by which this can be done safely every time which is as follows: Gather the nuts as they fall from the trees—of course when they begin to fall naturally all may be shaken down at once—and spread them not over a foot deep, on the bare ground under the shade of trees. Cover out of sight with straw or leaves, with some sticks to hold in place, called a rot heap; then after they are frozen and will stay so, they may be shipped in bags, boxes, barrels, or in bulk by the car load, and then, again, placed in rot heaps, as above, until so early in the spring as the soil is in workable condition. Then plant as directed in the fall, except the soil should be firmly packed around the nuts. Keep free from weeds by good cultivation, and in due time you will have a splendid grove.

"There was an immense crop of walnuts in this district last fall, and thousands of bushels were put up carefully in this way, all ready for shipment before the weather became warm; many more thousands were planted to grow seedlings from, for, notwithstanding the walnut transplants poorly when of considerable size, the one year's seedlings transplant with as little loss as the average trees.

"There is no tree better adapted for planting to secure timber claims with than the black walnut, and none more valuable when the timber is grown. For this purpose the land should be plowed deeply, then harrowed to fineness and firmness, and furrowed out in rows four, six, eight or ten feet apart. The nuts may then be planted as directed. It is best to plant thickly in the rows, then if too thick they can be thinned out, transplanting the thinnings, or selling them to the neighbors. They should be thoroughly cultivated, until large enough to shade the ground, and thinned out as necessary as they grow larger. A walnut grove thoroughly cultivated, until large enough to shade the ground, and thinned out as necessary as they grow larger. A walnut grove thoroughly cultivated the first ten years will grow at least 20 feet high, while one not cultivated at all would only grow two or three feet in that time."

AMERICAN WOOD MANUFACTURE.

Perhaps in no branch of American industry has greater progress been made within the last thirty years than in the vast and varied manufacture of wood. We have not only distanced all rivals in this branch of industry, but have gained a firm foothold in foreign markets, especially for our agriculture implements, furniture, and a variety of labor-saving machines. The perfection to which our wood-working machines have been brought by unrivaled ingenuity has given American manufacturers of wood a world-wide reputation. For, as nine-tenths of the cost of articles included under the head of "woodenware" consists in the labor necessary to their manufacture, and as the wages of labor in this country are comparatively high, it could hardly have produced successfully its own woodenware without the aid of machinery. With this aid, however, the home market has not only been supplied by home dealers, but American woodenware has found its way into various foreign markets. For instance, the exports of woodenware for the year ending June 30, 1882, were valued at nearly half a million dollars. The manufacture of furniture increased in value from $17,633,000 in 1850, to $75,539,000 in 1870, while the estimated increase in the last thirteen years has been very large. The growth in the manufacture of agricultural implements has been still greater. With woods of all kinds in abundance and easily accessible, with improved machinery for the purpose, there seems to be no reason why the exportation of woodenware should not yearly increase.—*Ex.*

THE EVILS OF FOREST DESTRUCTION.

The following graphic picture of the irremediable disasters following the reckless and improvident destruction of woodland, should very forcibly impress itself upon the understanding of all intelligent persons. The paragraph is from Sinclair Tousey's "Travels in Southern Europe."

"Much of France, nearly all Spain, and large portions of Italy are entirely destitute of forests. The tourist can travel day after day in these countries without seeing standing timber enough to make a decent sized barn. The people in those sections are bothered to get the very little fuel they need, depending upon the trimmings of shade and fruit trees and vines for what they get; while the damage done the country by heavy rains is beyond estimate, especially in the hilly regions, where the rain, falling on the ground, finding no trees with their wide-spreading roots to check its passage off the surface, rushes with tremendous force into valleys, carrying all before it.

"So destructive are these torrents, and so suddenly do they come down the river bed, that in many places heavy stone walls are erected to keep the sweeping floods within bounds. Within a few hours after one of these torrents has swept down a valley, the bed of the river will be as dry as if water had never wet it. Another evil is the scarcity of small running streams for the use of cattle and for manufacturing purposes.

"The unchecked rain finding nothing in its way, hastily passes from the surface and gets to the sea; whereas, if the land were sprinkled with forests, much of it would be absorbed by the ground, and by gradual percolation finds its way to the streams and keep them alive to aid the work of man and give drink to animals.

"I earnestly implore the owners of forests in our favored land to be careful and waste none. We can leave our successors no better legacy."

Jarrah Timber.

The English *Timber Trades Journal* had an article recently on the wonderful enduring power of Jarrah timber, which is said to resist all kinds of insects and is impervious as well to the action of dry rot. A suggestion has been made to pile and slab the banks of the Suez Canal with this description of timber, which would enable vessels to travel at their ordinary speed without any danger of washing away the banks. This might be done with the prospect of the timber lasting for years, and one effect it would have would be that of increasing width of the canal considerably, so that two vessels could pass one another without causing any delay. When the virtues of the wood become fully realized, we shall hear more of it as a saleable commodity.

Sale of White Pine.

Quebec, March 31.—An important sale of white pine has just been concluded in Quebec. The transaction involves about 100,000 feet of 18½ inch average, and the price obtained is 32 cents per foot measured off.

It Should be Investigated.—If any of our readers suffer from chronic diseases of the stomach, liver kidneys, or the blood, they should investigate the merits of Burdock Blood Bitters. It is making the most remarkable cures on record.

A Valuable Hint.—Artizans, actors, sportsmen, mechanics and laboring men, in fact all who unduly exert muscular strength, are subject to painful contractions of the cords, stiff joints and lameness; to all such Hagyard's Yellow Oil is a prompt relief and perfect cure.

PINE EXTRACT FOR BATHING.

It has long been recognized that the atmosphere of pine forests has an invigorating and beneficial effect upon people with weak constitutions and suffering from pulmonary disorders. At some of the watering places of Germany the very simple prescription of the physician is is that the patient should spend several hours a day walking or riding through the pine wood. This simple treatment is sometimes supplemented by the taking of pine baths, and in the case of kidney diseases and for delicate children this is claimed to be highly beneficial. The bath is prepared by simply pouring into the water about half a tumblerful of an extract made from the fresh needles of the pine. This extract is dark in color and closely resembles molasses in consistency, and when poured into the bath gives the water a muddy appearance with a slight foam on the surface. The repugnance one feels to enter into such a muddy looking fluid is dispelled as soon as the delightful aroma which arises from the bath is inhaled. Although there may be some doubt whether pine baths act upon the system in any other wise than as a tonic, still as an adjunct to the daily bath, infusion of the pine extract induces a most agreeable sensation. It gives the skin a deliciously soft and silky feeling, and the effect upon the nerves is quieting. It is a matter of some surprise to us that the business of manufacturing and bottling the extract for private use and public bathing establishments has not been tried in this country, where pine forests abound so extensively. The extract when properly bottled and securely corked will not deteriorate for a long time, and the cost for gathering the pine needles and extracting their tarry substance would not be very great, while the demand for it would likely increase to large proportions when the public became accustomed to its use.—*Scientific American.*

Milkweed Fiber.

In a late issue we published a suggestion to miscroscopists by President Spitzli, of the Textile Microscopic Society, of Boston, in regard to the fiber of the Ascleoias and Acerates, the milkweek or silkweed. We have succeeded in dyeing the fibre of this plant a bright red, a brilliant green, deep blue, bright yellow, and a delicate pink, by the use of Thomas' one-dip dyes. We have recently added to our facilities for examination a first-class microscope, with all the accessories and apparatus for the examination of cotton, wool, silk and other fibers, and shall be pleased to receive from our friends who are interested in their manufacture such samples as they may be pleased to send us of fibers which show peculiarities in their treatment, or specimens which have been injured in any of the processes which they undergo. Specimens of the milkweed fiber show a simple tube with a very thin transparent cell wall, easily ruptured and without convolutions, imbrications or contents. The section is a plain ring showing a very thin wall and no internal matter. This wall is very fine and brittle, and we doubt if it can ever be utilized for textile purposes, although its appearance when dyed is beautiful in the extreme, from the silky flossy appearance of the fiber. We trust that President Spitzl's suggestion may receive the attention of micros copists, and that, if possible, a use may be found for this fiber, which at present, though growing wild, is not to our knowledge utilized in any way.—*Cotton, Wool and Iron.*

The Pine Region of the Northwest.

The resources of the pine region of the Northwest are surprising to those who looked upon it years ago as a waste of forests. During the last ten years the lumber and shingle yield of these forests has sold for more than the assessed valuation of the real estate and personal property of the state of Michigan, and more than the valuation of both Wisconsin and Minnesota. This is not taking into consideration the hardwood trade, which, especially in Michigan, has been heavy. In the latter state salt, mineral springs, iron and copper have been found in such quantities that the future revenues from them cannot be calculated. It is safe to say that portions of Wisconsin are rich in iron, and now there are strong hopes, at least in the mind of the gentleman who has invested in "diamond land," that diamonds will be one of the productions of the Badger state. What Minnesota may produce is to be known. She will have to do well if she goes the sister states one better, but the possibilities of the great Northwest are so great that no one will be astonished if she does.—*Northwestern Lumberman.*

The Foreign Trade of the United States.

The imports for the first seven months of the fiscal year as published by the Treasury Department, show a falling off from $428,000,000 to $389,000,000, almost wholly in dutiable goods. Chemicals have fallen off 60 per cent., cottons 25 per cent., earthenware 50 per cent., pig iron 40 per cent., steel rails 95 per cent., woolens 25 per cent. Sugar and jewelry are the only articles showing a heavy increase. Our total exports for the same time show a decrease from $495,000,000 to $462,000,000, but hops, raw cotton, and wheat have fallen off more than enough to account decrease. Pork products have all increased in the value of exports over last year as have dairy products. The value of cotton manufacturers exported for the seven months ending January 31st, was some $6,870,000, against about $8,000,000 for the corresponding period a year ago. The exports of woolen manufactures for the corresponding periods show an increase, being about $400,000 against $192,500. The imports of cotton manufacturers a decrease of about $1,100,000,

A Long Straight Edge.

An absolutely exact straight edge of more than 36 inches is a wonder of mechanism. One of six feet was not recently believed possible, although several had been made on different plans of web-like and truss construction. It has been claimed, however, that almost absolute exactness has been secured by a straight edge 12 feet long. The appliance looks like an arched truss, the highest spring of the ach being only 20 inches in a length of 12 feet. The space between the chord and the spring is filled with diagonal lattice work; the whole is a casting on which no peening with the hammer is allowed. Three of these straight edges have been made, one remaining in the establishment where built and two going to technical colleges. Each of them has been tested by each other, and proved to be practically perfect. Such a tool is invaluable in testing lathe and planer beds.—*Scientific American.*

Decreasing the Amount of Sawdust.

Speaking about sawdust, it seems to us that, with regard to the best way of counteracting the evil tendency of its wholesale accumulation, a reduction of the quantity produced would have the most beneficial results. We have decreased the size and thickness of structures as we successfully used cast iron, wrought iron and steel; we have substituted stronger for weaker material in various ports of almost every industry; why should we despair of finding some metal or alloy stronger than the steel of which our present saws are made. Anything which could by some means or other reduce the thickness of the saw blades one-fourth or one-third, would reduce the quantity of the resulting sawdust in a corresponding ratio, and would increase the quantity of lumber by just as much.—*Buffalo Lumber World.*

Forest Preservation.

The bill introduced in the Senate by Mr. Macpherson to amend the Dominion Lands Act provides for the preservation of trees on the crests and slopes of the Rocky Mountains to secure the proper maintenance throughout the year of the volumne of water in the rivers and streams which traverse the Northwest Territories. The Government propose to reserve from sale, lease, or license, portions of land in the Northwest Territories, and appropriate such lands for forests, parks, and officers will be appointed for the preservation of such reserves and forest parks. Heavy penalties will be imposed upon persons convicted of wilfully and unnecessarily destroying forest trees in the Northwest. This is a wise and much needed measure. Had the same policy been adopted in Ontario, a great benefit to the public would have resulted, and even yet it is not too late.

Chips.

THE mills at Moss point, Miss., are running day and night.

THE Red Cedar river in Wisconsin will furnish 110,000,000 feet of logs for the approaching sawing season.

THE Dubuque Iowa *Herald* says:—"In this prairie state it would be a wise movement if every man, and especially every farmer should on a certain day, set apart for the purpose, set out one or more trees."

THE Ottawa *Free Press* says:—It is reported that G. B. Hall & Co.'s extensive mills at Montmorenci are going to saw for Gilmour & Co., of this city, this year. Contracts for freight from this city, have been made about 10 cents less per 1,000 feet than last year's rates

IT is estimated that about 5,000,000 cubic feet of cottonwood, sycamore, basswood, and elm, elm, have been cut this winter in Essex county, along the shores of Lake St. Clair, for manufacture in hoops and heading. It will all be rafted next summer, and floated down the river to Detroit and Trenton mills.

A. W. LOBDELL & CO., of Mecosta, have a team of horses weighing 2,400 pounds, which they claimed hauled the biggest load of shingles ever hauled by one team in this state. The load consisted of 50 M. of 18 inch shingles, and the distance was three and a half miles, including one sharp hill. The load weighed about 9½ tons.

THE Mobile and Ohio road hauls timber into Mobile from Kushla for four cents per hundred. The road offers similar inducements from more distant stations; consequently large amounts of timber is being sent from Mobile for export from points along the road. Sixteen carloads of heavy navy timber was received in one day recently from one point.

THE cuneiform inscriptions of Nebuchadnezzar have lately, says the *Antiquary*, been discovered by M. Pognon, French Assistant-Consul, on the rocks in the Wady Brissa, a wide valley on the eastern slope of the Lebanon. They contain an account of buildings in progress at Babylon, and are supposed to make the site of a timber yard in that locality.

REGARDING operations on the Susquehanna river in Pennsylvania, a correspondent says that "the stock was secured, and we have probably about the same stock of pine as last year, with probably from 30,000,000 to 40,000,000 feet less hemlock. The booms are hung, and we are waiting for a flood, with the drives all very well along in the small streams.

THE value of lands in the Southern States aggregate but twenty per cent of the land values in the Union, but the annual products of Southern soil rank at thirty per cent of the whole. In other words, says the Boston *Commercial Bulletin*, one-fifth in money value of the land lying in the South produces one-third of the productive values of the entire country.

THE destruction of black walnut trees in some parts of the United State has been enormous. Whole forests of valuable trees have been destroyed by farmers ignorant of their value. Of late an English syndicate through American agents have been buying all the black walnut they could get their hands on. In some cases they secured it at a merely nominal price.

ABOUT 500,000 feet of logs went rushing out into lake Michigan recently, at Grand Haven, through the breakage of the Sisson & Lilly boom. Lumbermen at least occasionally are practically reminded that the removal of the timber adjacent to streams is conducive to destructive floods, whether "wise-in-their-own-conceit" lumber journals will have it so or not. They had a lesson at Grand Rapids last year.

MR. J. GALLIMORE, ex-mayor of Newcastle-under-Lyme, builder and contractor, twenty years ago, through circumstances over which he had no control, was compelled to arrange with his creditors. Since that time great success has attended his business undertakings, and a few days ago he surprised all his old creditors, or their representatives, by paying them in full. The balance remitted amounted to nearly 10s. in the pound on the orginal liabilities.

VULCAN IRON WORKS
[ESTABLISHED 1842.]

STEWART & FLECK, Jr.,
Manufacturers of every Description of
Saw and Grist Mill Machinery,
Water Wheels, Steam Engines, Derricks, Boilers, Steam Pumps, Mining Machinery.
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Wellington Street, OTTAWA, Ont.

J. T. LAMBERT,
Lumber and Commission Agent.
ORDERS FOR DIMENSIONS AND ALL OTHER KINDS AND GRADES OF
American Lumber
PROMPTLY ATTENDED TO.
Timber Limits and the Square Timber Trade a Specialty.
Office, Wellington Street, OTTAWA. 1L6

100 COILS
Pure Manilla Rope
Assorted Sizes up to 2 in. diameter.
3 TONS EXTRA
Dry Tarred Lath Yarn
Single and Double Tie. Samples free by mail.
5 TONS
Best Proved Boom Chain
½, 9-16 and ⅝ inch. At the very lowest figures.
Gandy Cotton Belting
Under the fullest guarantee, all sizes. Delivered free of freight. Prices supplied on application.
Dynamite, Detonators, Platum Fuse and Safety Fuse, always on hand.
Large Orders Delivered Free.
Iron, Steel and Hardware, both Heavy and Shelf, for Lumbermen and Mill Owners.
GEORGE STETHEM
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WILL CURE OR RELIEVE.
BILIOUSNESS, DYSPEPSIA, INDIGESTION, JAUNDICE, ERYSIPELAS, SALT RHEUM, HEARTBURN, HEADACHE, DIZZINESS, DROPSY, FLUTTERING OF THE HEART, ACIDITY OF THE STOMACH, DRYNESS OF THE SKIN,
And every species of diseases arising from disordered LIVER, KIDNEYS, STOMACH, BOWELS OR BLOOD.
T. MILBURN & CO., Proprietors, Toronto.

Market Reports.

MONTREAL.

From Our Own Correspondent.

APRIL 9.—Business in this city has been rather sluggish during the past two week, building operations are not proceeding very fast as the weather has been very unfavorable, and no activity is now looked for till navigation opens. A fair amount of business is reported as being done in Ottawa, and prospects here are good for business as the season advances. Prices here are about the same as last quoted only we re duce quotatious for lath :

Pine, 1st quality, ₱ M	$35 00@40 00
P ne, 2nd " ₱ M	22 00@24 00
Pine, shipping culls, ₱ M	14 00@16 00
Pine, 4th quality deals, ₱ M	11 00@12 00
Pine, mill culls, ₱ M	10 00@12 00
Spruce, ₱ M	10 00@13 00
Hemlock, ₱ M	9 00@10 00
Ash, run of log culls out, ₱ M	20 00@25 00
Bass, " " ₱ M	17 00@20 00
Oak, ₱ M	40 00@50 00
Walnut ₱ M	60 00 100 00
Cherry, ₱ M	60 00@80 00
Butternut, ₱ M	35 00@40 00
Birch, ₱ M	20 00@25 00
Hard Maple, ₱ M	25 00@30 00
Lath, ₱ M	2 50@ 0 00
Shingles, 1st, ₱ M	3 00@ 0 00
Shingles, 2nd, ₱ M	2 50@ 0 00

CORDWOOD.

There has not been much demand for wood and until navigation opens and plentiful receipts are coming in by boats no change in price need be looked for. Receipts are fair by the G. T. R., indeed wood would have been scarce enough here this winter had it not been for supplies brought in by that railway. We still quote ex cartage at the railway station :

Long Maple	$ 7 00
Long Birch	7 00
Long Beech	6 50
Tamarack	5 50

ST. JOHN.

A leading lumberman supplied the St. John *News* with the following figures, showing the extent of lumbering operations in various parts of the Province this winter as compared with those of last year. They include, also, operations on the Aroostook and Upper St. John waters, and in Maine, where the logging is mostly conducted by parties from this Province. Here are the figures, superficial feet being implied :—

	1883.	1884.
Upper St. John	42,000,000	17,000,000
Aroostook River	70,000,000	36,000,000
St. John River (scattering)	12,000,000	8,000,000
Nashwaak	28,000,000	16,000,000
St. Croix	20,000,000	12,000,000
Grand Lake	12,000,000	7,000,000
Bay Shore (est'd)	25,000,000	14,000,000
T. W. Miramichi	90,000,000	50,000,000
S. W. Miramichi	36,000,000	17,000,000
Restigouche	15,000,000	6,000,000
North Shore (scattering)	36,000,000	20,000,000
Total	386,000,000	203,000,000

Falling off over 47 per cent.

TORONTO.

From Our Own Correspondent

APRIL 9.—Trade from all the retail yards continues brisk, extra teams having been set to work by some dealers, their ordinary compliment of horses not being able to keep pace with the requirements of customers. Figures on bill stuff are also a shade firmer, and may now be safely quoted at figures given you with this letter, with a strong probability that former quotations will be reached before many weeks are past. XXX sawn shingles are selling slightly lower, the ruling figure being $2.90 per M., one firm I learn are sending out of their yard at $2.75, but as soon as the season is fairly opened and the usual demand springs up in Western Ontario, prices will advance to the old figure again.

There are no shipments from our docks as yet A few vessels have arrived here, and those now in winter quarters are actively fitting up for the season's trade, although it is quite certain that the quantity of lumber to be shipped from here this season will fall short of that of former years, and in square timber nothing worthy of note will be rafted here. A few cars are coming in over the C. V. and G. T. R. roads, but nothing as yet over the N. & N. W., and so far as I am able to learn nothing is likely to come over that road in the timber line.

It is slightly premature to speculate as to what will be the figures realized on the various grades of lumber in this market during this season, but this much may be taken as morally certain, good lumber will command remunerative prices, and the coarser grades of boards and plank will rule low ; and so low, I fear, as to prove quite unremunerative to the manufacturer. This must continue to be the case to a greater or lesser extent so long as the present duties on foreign shipments remain as at present, and the only redeeming feature in the manufacturers' favor this year, is the fact that their stocks of logs have been more carefully selected this season, so that the proportion of good lumber will be considerably larger than for some years past. This fact combined with the prospect of an earlier cut and consequently fit for market sooner than last year, are points somewhat in the millmen's favor.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
Scantling and joist, up to 16 ft	13 50
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 00
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	20 00
" " " 32 ft	21 00
" " " 34 ft	22 50@22 50
" " " 36 ft	24 00
" " " 38 ft	27 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	24 00
" boards "	20 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 00
Three uppers, Am. inspection	35 00@40 00
B. M.	
1½-inch flooring, dressed	30 00
1½ " " rough	16 00
1½ " " dressed	25 00
1½ " " undressed	15 00@15 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ₱ M	2 90
Sawn Lath	2 75

WINNIPEG.

The *Commercial* of the 1st inst. says :—Although there has been some stir in the lumber trade during the week matters are perversely slow still, and intending builders hang back very much. Contrary to expectations prices have not reached that level at which reliable quotations could be given. Should the weather continue mild a very great improvement in business must naturally take place within ten days.

Pine lumber, 1st, common boards, dressed	$26 50
do, 2nd, dressed	25 50
do, 1st dressed rough	26 50
do, 2nd do.	25 50
Sheating, rough	25 00
Timber 16 feet and under	24 00
do. over 16 feet, for each additional 2 feet.	1 00
Dimension and joists 16 feet and under	24 00
do, do, over 16 feet for each	1 00
Fencing	25 00
2 and 3 in. battens	30 00
A. stock boards, all widths	50 00
B. do. do.	45 00
C. do. do.	40 00
D. do. do.	35 00
1st clear, 1, 1¼, 1½, and 2 inch	60 00
2nd do. do. do.	56 00
Window and door casings	50 00
Base boards, dressed	50 00
1st pine flooring, siding and ceiling	40 00
2nd do. do. do.	35 00
3rd do. do. do.	30 00
½ inch split siding, dressed	30 00
Spruce lumber—timber 16 feet and under	22 00
do. over 16 feet for each additional 2 feet	1 00
Dimension and joists, 16 feet and under	23 00
do do. over 16 feet, for each additional 2 feet	1 00
Boards	22 00
1st flooring, siding and ceiling	28 00
XX shingles	5 25
Star A shingles	5 25
X shingles	5 00
A. do.	4 50
Lath	4 50

BUFFALO.

We quote cargo lots :—

Uppers	$46 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

BOSTON.

Cotton, Wool and Iron of March 5, says :—General trade is moving along fairly and is rather improving, although the variable weather has been more or less of a retarding feature. A good deal of building is in contemplation, and operations will be lively as soon as the ground gets into a proper condition. Orders for spruce are coming in rapidly, with prices lower than last year. The demand for western pine is looking up, and prices are firm for desirable grades. Southern pine is moving quietly and steadily. There is a good demand for hardwoods, especially walnut. Ash is going well, and cherry and whitewood fairly.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

ALBANY.

Quotations at the yards are as follows :—

Pine, clear, ₱ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	45 00@50 00
Pine, good box	22 00@33 00
Pine, 10-in. plank, each	00 42@00 46
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 21
Pine, 10-in. boards, 16 ft., ₱ M	28 00@32 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	18 00@20 00
Pine, 1-in. siding, select	43 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ₱ M	40 00@43 00
Ash, second quality, ₱ M	25 00@30 00
Cherry, good, ₱ M	60 00@85 00
Cherry, common, ₱ M	25 00@35 00
Oak, good, ₱ M	40 00@43 00
Oak, second quality, ₱ M	20 00@25 00
Basswood, ₱ M	25 00@30 00
Hickory, ₱ M	40 00@40 00
Maple, Canada, ₱ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ₱ M	38 00@40 00
Shingles, shaved, pine, ₱ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 4 90
" clear, "	0 00@ 3 30
" cedar, mixed	0 00@ 3 50
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ₱ M	0 00@ 2 75
Lath, spruce, "	0 00@ 3 00

OSWEGO, N. Y.

Three uppers	$44 00@45 00
Pickings	34 00@35 00
Fine, common	20 00@24 00
Common	13 00@16 00
Culls	10 00@13 00
Mill run lots	14 00@18 00
Sidings, selected, 1 inch	30 00@35 00
1¼ inch	30 00@36 00
Mill run, 1x10, 12 inch	17 00@19 00
selected	22 00@26 00
Shippers	13 00@16 00
Strips, 1 and 1½ inch mill run	14 00@18 00
" " " culls	10 00@12 00
1x6 selected for clapboards	22 00@35 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 00@ 3 50
XX pine shingles	2 30@ 2 50
Lath	2 00@ 2 25

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@47 00
Common	18 00@24 00
Culls	12 00@14 00

LONDON.

The *Timber Trades Journal* of March 29, says :—At Messrs. Churchill & Sim's sale this week it struck us that there was not the usual bustle and excitement that we have been accustomed to witness at this time of year, when unreserved goods have been plentifully distributed over the pages of the catalogue, nor did the room seem so crowded as has been the case at the early spring sales of previous years. What this apparent indifference is a sign of it is not easy to pronounce, but a great many reasons for it might be assigned, though possibly none of them might be the right one. A likely cause of this position of affairs would be that the dealers are already supplied with all they want, and hold as much stock as they care about while the prospect of business reviving is still so doubtful.

The principal feature of this week's sale was the large quantity of first quality goods which were submitted without reserve, as well as the numerous lots of best planks from St. Petersburg and other ports which the catalogue contained.

The Swedish parcels offered in the sale without reserve appeared to be in slightly better request, though these even did not seem to be appreciated to the extent which the limited dock stocks would appear to warrant.

Amongst the other Swedish parcels submitted the values realized were hardly up to expectations, and in most cases would barely cover cost. The general expectation was to see a more active demand for Gulf of Bothnia deals than was exhibited in the room on this ocassion, but it is evident from the result that, if stocks in first hands are nominal, the trade at any rate experience no dearth of Swedish wood.

The various lots of timber sold seemed to realize fair values, but it is reported the market for wood in the log is holding up, and in the cargo trade we learn that most of the business done as yet has been in hewn timber.

The present disadvantage of sawn timber is its general inferiority, the extra labor being in that way counterbalanced.

Thursday's proceedings were notable for the low prices spruce realized, 2nd Quebec regulars going at about the ordinary price of 3rds, and for the parcel ex Crane the major portion went at £7 5s. There was certainly plenty of bidding for these goods, but the effect on prices of this apparent activity was not preceptible. The goods ex Blaydon, also Quebec went better, but the prices for these were very poor, £6 15s. to £7 5s. for the 3rds, and £8 15s. to £9 for the best can hardly be satisfactory to sellers of this class of wood. The few lots of best yellow pine went at fairly good prices, and the 2x11 Quebec 1st bright ex Ottolina, 12 ft which fetched £27 5s., were well done by, nor could much fault be found with £20 for the 10 ft.

This size is somewhat scarce, we understand, but a reason for the big price might partly be found in the lots being confined to only a hundred pieces or so. The buyers, however, were influential firms, to whom a few hundred pieces more or less would in the usual way be reckoned of no moment, but when trade is slack and prices unsettled the size of the parcels in expensive wood becomes a consideration.

LIVERPOOL.

The *Timber Trades Journal* of March 22, says :—The arrivals of timber-laden vessels still continue to be light, though at the same time they are sufficient for the meagre quantity of business now in progress, if indeed the word progress can be applied to its present condition, which is perhaps more nearly represented by stagnation than any other epithet.

The retail orders in the market are few in number and unimportant in quantity, and even these are keenly competed for at low prices ; whilst in the importing part of the trade buyers are unwilling to entertain proposals for contracts unless at prices ridiculously low. There has been very little business done in contracting for pitch pine cargoes, and although the rumours of short supplies in the shipping ports are still put forward as was mentioned last week, they appear to have little or no effect upon the market, and the indisposition to purchase for arrival seems to be as strong as ever.

Several steamers have been chartered for spruce deals from St. John, N. B., at 50s. per standard, and as this low freight will enable shippers to get nearly their f.o.b. values, some cargoes have been placed on c.i.f. terms at low prices, both to Livepool and adjacent ports. This will prevent any advance being obtained for the yarded stocks of these goods for some time to come, and evidently they will be hung up until a decidedly improved demand sets in or unemployed steam tonnage becomes scarcer. The probabilities of the latter alternative taking place seem rather remote ; it is reported that freights, Quebec to Liverpool, have been done at 24s. per load.

GLASGOW.

The *Timber Trades Journal* of March 22, says :—Dealings in whitewoods for the week have been on a limited scale, and meantime sawmills here generally are doing a quiet business. There have been few new works of importance in the building way started lately, such as would give a decided impetus to the trade.

One auction sale has been held since last writing, Messrs. Alison, Cousland & Hamilton, brokers. It took place at Yorkhill Wharf, Glasgow, and the catalogue comprised about 400 logs United States black walnut (being salvage of wrecked cargo), also a varied assortment of deals. The walnut was cleared out at from 2s. 10d. to 6s. per c. ft., averaging 3s. 10½d. It was evident that the company, which was a large one, had been attracted principally by the sale of walnut. The bidding for the

other goods offered being languid, and not meeting brokers' views, that portion of the catalogue was withdrawn.

There is one lot of about 90 logs United States black walnut remaining at present in Yorkhill Yards here, in first hands. Recent deliveries of deals from these yards show a falling off. In February there were 101,196 pieces delivered, and for the past month only about 70,000 pieces.

The stocks of wood (all sorts) in Clyde ports, at 31st March, will be shown in an early number.

THE MUSKOKA SLIDE, DAM AND BOOM COMPANY.

From a return laid before the Legislature we learn the following facts with regard to this company :

Amount of Capital Stock	$ 50,000 00
Number of Shares	2,500
Amount of stock paid up	$ 49,558 30
Amount of expenditure during 1883	61,547 68
Cost of work and material	29,424 87
Expended for repairs	1,261 14
Tolls received	16,474 90
From driving	43,700 71
Debts due by company	17,798 27

LIST OF STOCKHOLDERS.

Jas. Balfour, W. S. Edinburgh	$ 3,000 00
British Canadian Lumbering Co. Toronto	20,000 00
A. H. Campbell, Toronto	500 00
H. H. Cook, do	5,000 00
J. M. Dollar, Midland	5,000 00
Robt. Dollar, Marquette, Mich	1,000 00
Fred. King, England	3,000 00
J. S. Lockie, Toronto	500 00
Hon. A. McKenzie, Toronto	1,000 00
W. J. Menzies, W. S. Edinburgh	2,000 00
Miss Campbell, Midland	1,000 00
J. S. Playfair, Toronto	1,000 00
R. Power, Barrie	3,999 30
Jas. Scott, Toronto	2,000 00
G. W. Taylor, Gravenhurst	559 00
Total	$ 49,558 30

According to the return, this company does not propose to do any driving in 1884, and it accordingly asks the authority of the Commissioner of Public Works to charge the following

TOLLS FOR 1884.

Between	Section.	Tolls to Georgian Bay.	Tolls to Gravenh'st.
Bala	1	8 c.	
Any point on Muskoka Lake	2	8	
Any point on Popeau Lake	3	8	
Any point on Joseph Lake	4	8	
Port Sydney	5	26	18 c.
Any point on Vernon Lake	6	27	19
Any point on Buck Lake	7	30	22
Eastern boundary Chaffey	8	30	22
Eastern boundary Sinclair	9	30	22
Oakley Bridge	10	25	17
Eastern boundary of McLean	11	26	18
West of Bobcaygeon Road	12	26	18
Any point on Hollow Lake	13	35	27
Bobcaygeon line north branch	14	30	22

The above rates include sorting at mouth of Muskoka River and at Georgian Bay. Sorting at all other points to be charged at actual cost. Saw logs calculated at 200 feet B. M. each. Tolls on other kinds of lumber and timber to be in proportion to the above.

The Cut in Maine and New Brunswick.

The lumber cut for the State of Maine and the Province of New Brunswick will be very much less for 1884 than it has been for some years past. We have had access to some figures which conclusively prove this fact. The cut on St. Croix River will be 20,000,000 short of last year; on the Penobscot and its branches the shortage this year will be 65,000,000 and on the Aroostook, Upper St. John, North Shore of New Brunswick and Bay Shore of New Brunswick, the shortage will be 183,000,000—showing a total fall short over 1883 of 268,000,000 feet. Of course, owing to the extensive drought of last summer a considerable stock of logs has been been wintered over; but even taking this into consideration, the stock that will be on hand at the beginning of this year's sawing season will be very materially less than that of last year. With anything like a demand at all, the price of our great staple article should increase, and we cannot but think, in the face of the figures given above, that this will be so.—*St. John Globe.*

Exhibition of Machinery.

An International Exhibition of Motors and Implementary Machinery for the smaller industries will be held at Vienna in the grounds of the Imperial Royal Horticultural Society by the Industrial Corporation of Lower Austria, under the patronage of his Imperial and Royal Highness the Archduke Carl Ludwig.

The Exhibition will be opened on the 24th of July, and will close at the latest by the 12th of October, 1884, and will contain the following groups:—1. Motors (up to the three-horse power). 2. Transmitters. 3. Tools, Implementary Machinery, and Working Appliances. 4. Physical and Chemical Apparatus. 5. Means of reproducing Graphic Impressions. 6. School and Teaching Appliances for Technological Instruction.

Applications should be addressed, not later than the 1st of April, 1884, "And den Niederoesterreichischen Gewerbeverein, I., Eschenbachgasse, 11, Wien, Austria," on forms obtainable from the mentioned quarter.

There will be no prizes awarded, but each exhibitor will receive a memorial medal and certificate of participation at the exhibition.

Motors and machines will be examined and tested by a special Commission, which will give certificates of the result of such trials.

An Ingenious Device

An ingenious device to prevent boiler explosion has recently been patented by two New York engineers. It consists of an electric battery, placed on the wall near the boiler, connected with a gong by negative and positive wires. These wires run to the water gauge and connect with a glass bulb filled with mercury. When the water falls below the point of attachment the steam rushes into the space surrounding the mercury bulb, and the mercury expends. As it rises in the tube it comes in contact with a platinum wire, thus closing the electric circuit and ringing the alarm bell. When water is pumped into the boiler it forces the steam back, breaks the circuit and puts the alarm in working order again. The invention recommends itself on account of its simplicity.

Dwarf Trees.

The dwarf trees of China are curiosities of forestry. Every child knows how the Chinese cramp their women's feet by bandaging them when they are infants, and thus render it impossible for them to walk. It is, however, wonderful to see minature oaks, chestnuts, pines and cedars growing in flower pots, 50 years old and yet not a foot high. To do this take a young plant, cut off a tap root, and place it in a basin in which there is good soil kept well watered. If it grows too rapidly, dig down and shorten in several roots. Every year the leaves grow smaller, and the little dwarf trees make interesting pets.

Preserving Montana Forests.

WASHINGTON, March 12.—A bill introduced in the Senate to-day by Edmunds provides that a tract of land in the territory of Montana, of about 6,900 square miles, be reserved and withdrawn from settlement, occupancy, or sale, and set apart for ever as a national forest reservation for the preservation of the national forests, protecting the head waters and tributaries of the Columbia and Missouri rivers.

When You Catch Cold.

Dr. J. Mortimer Granville, writing to the London *Daily News*, says :—

There are two lessons to be learnt and laid to heart by those who would treat a chill successfully and spare themselves the cons equences of a cold. Secure a full reacti on quickly, but avoid over-stimulation. Nature's remedies for a chill are sneezing and shivering. By these commotions, which are essentially mechanical, she rouses panic stricken centres. A good fit of sneezing keeps off many a cold, and the man who carries a snuff-box and uses it at once may generally feel safe—that is, if he sneezes violently immediately after the chill. Brisk exercise, short of fatigue which exhausts, will also prevent a "cold" supervening upon a chill. The recourse to stimulants is bad. Attention should be directed to the nervous system, not to the circulation of the blood. The heart will take care of itself if we will only see that the nerves are quickly roused to action. When the hunting man feels chilled he should mount a fresh horse, and take a short but brisk trot to rouse his nerves. When the home-stayer thinks he has "sat in a draught and caught cold," he should quickly put on his hat and take a rapid walk or run. The aim must be, not to warm, but to revive energy. A very little consideration will show that these two aims are different, and common-sense will generally suggest the best mode of treatment within reach at the moment. This effort of self-cure by exertion will have the additional advantage of setting the brain in action. The brain is the great head-centre of the nervous system, and when the will acts powerfully at the instant of any impression which has a tendency to depress the lower-nerve centres the activity of the higher, the supreme cerebral, the intellectual centres, generally wards off the attack. The man whose brain or mind is powerfully excited at the moment of exposure to a chill seldom takes cold. I make no apology for placing these technical details before your readers, because they ought to be known to every one. The prevention of a cold is a matter of self-held.

Spring Care of Breeding Sows.

On many farms the breeding sows are perhaps the most profitable stock. But the profit is largely dependant upon the safe rearing of good sized litters. We know so well how much depends upon practical experience in the safe rearing of large litters that we shall not attempt to give minute instructions for the novice in such a case. It is recommended for safety, if the weather be cold, to take the pigs from the sow as fast as they are dropped, in a warm basket to a warm room, and keep them warm till the sow is ready to suckle them. When the sow is done farrowing a warm bran slop, with a gill of boiled flaxseed stirred in, should be given her.

When she has taken this the pigs may be brought to her to suckle, and they will usually commence their work with activity.

The sow must be fed sparingly for a few days, so as not to produce or keep up a feverish condition of the system. But when this danger is past she must be fed with special reference to a large secretion of milk.

Suppose she has eight pigs to feed, few have considered what a draft this is upon her system. After they are ten to twelve days old, they will drink three pounds of milk each per day. This will require the cow to produce twenty-four pounds each day—as much as an ordinary cow. To do this she must be fed on the most nutritious food, two hundred pounds of oats and one hundred pounds of corn ground together, with one pint of linseed oil-meal added to each day's feed, the whole cooked and given in a thin slop, will be as good a diet as can be found.—*National Live-Stock Journal.*

WEATHER PROBABILITIES.—Foretelling the weather is uncertain at the best, but it is certain that if you catch cold in this changeable climate you can best break its ill effects by Hagyard's Pectoral Balsam, the most reliable and pleasant remedy for coughs, colds, bronchial, and lung complaints. It is so agreeable that even a child may take it.

J. S. MAYO

IMPORTER AND MANUFACTURER OF

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OF EVERY DESCRIPTION.

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AMERICAN LUBRICATING OILS A SPECIALTY.

As I carry the LARGEST and BEST assorted Stock of OILS in the Dominion, I am prepared to fill all orders Promptly and at

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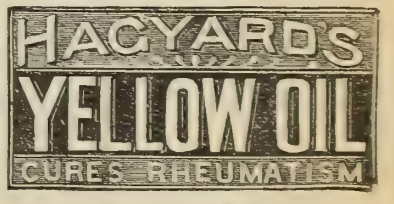
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OFFICE:—16 Custom House Square, MONTREAL.

N.B.—Second-Hand Machinery, Boilers, &c., Negotiated for.

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WORM POWDERS.

Are pleasant to take. Contain their own Purgative. Is a safe, sure, and *effectual destroyer of worms* in Children or Adults.

MACHINERY.

STEAM ENGINES, STEAM PUMPS, STEAM BOILERS, SAW MILL MACHINERY,
Of Every Description.

RUBBER BELTING,
LEATHER BELTING,
MILL SUPPLIES.

SHAFTING, HANGERS, PULLEYS, &c.

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ROBIN & SADLER

Have been awarded Three Years in succession at the Provincial and Dominion Exhibitions in Montreal, First Prizes for

LEATHER BELTING

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Fire-Engine Hose, &c.

Send for Price Lists and Discounts to the Factory

594, 596, 598, St. Joseph Street,

MONTREAL.

HUGH GIBSON,

MANUFACTURER OF

KNIGHT'S PATENT "EXCELSIOR"

SAW MILL DOGS

The Sawyer's Favorite

For Holding Logs upon a Saw Mill Carriage while being Sawn into Lumber.

MISSISSIPPI, June 7th, 1883.

HUGH GIBSON, ESQ.,—Your Patent Excelsior Mill Dogs give entire satisfaction, and is certainly up to your recommendation. They are the best Mill Dog in the market. I am very much pleased with them.

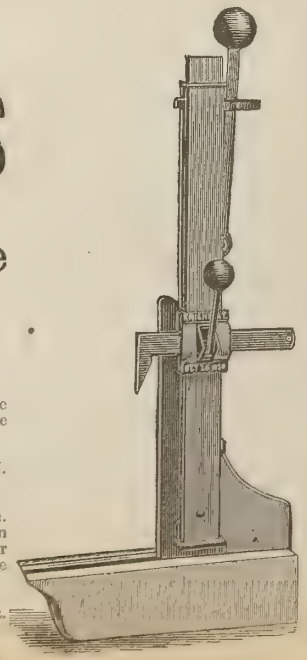
Yours Respectfully,
PETER McLAREN.

BERKLEY, April 20th, 1883.

HUGH GIBSON,—SIR,—The Dogs I bought of you give satisfaction. They beat any Dog that I ever saw for ripping or edging lumber on carriages. They are just the thing for scantling. I would not take $50 for them to-day and have to wait for another pair to come from you, because I believe they make two dollars a day for me.

Yours truly,
GEO. S. BROWN, JR.

2L1y



EXCELSIOR DOG.

Manufactured by HUGH GIBSON, CHATHAM.

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Tarred Felt, Roofing Pitch, Sheathing and Building Papers, Carpet and Rosined Waterproof Paper, Ready Roofing, &c. ☞All orders promptly attended to at LOW PRICES.

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Lumber Drivers' Calks

TEMPERED IN OIL.

25 BALL and 5 HEEL to Set

The Calks are now used by all the principal Drivers in Maine and New Brunswick.

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14 to 34 King and Queen Sts, MONTREAL,

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Steam Engines, Steam Boilers, Hoisting Engines, Steam Pumps,

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Also, Sole Manufacturer of BLAKE'S CHALLENGE STONE BREAKER.

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EXTRA HEAVY AMERICAN

Oak Tanned Leather Belting.

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☞A Full and Complete Stock always kept on hand. ☜WRITE FOR PRICES and DISCOUNTS.

We have the Largest and best equipped RUBBER FACTORY in the world for the manufacture of VULCANIZED INDIA RUBBER GOODS for Mechanical Purposes.

Our trade here has increased to such an enormous extent that in order to keep up with the demands, we have purchased from Major John Gray, M P.P., Parkdale, the plot of ground situated on West Lodge Avenue, adjoining the Credit Valley, Toronto, Grey and Bruce, Northern and Grand Trunk Railways, for the erection thereon of a BRANCH RUBBER FACTORY, works to be in full operation January 1st, 1884.

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MANUFACTURERS OF (LIMITED,)

SAW MILL AND GENERAL MACHINERY

We make a Specialty of Heavy Saw Mill Machinery.

OUR SAW MILL ENGINES are made Strong, Neat, and Durable, knowing well the ever varying strain they are subjected to in driving a Saw Mill.

We wish to call the attention of our Canadian Lumbermen to our First Class HEAVY SAW MILL MACHINERY for CIRCULAR MILLS and CIRCULAR and GANG MILLS of the most improved designs. We are prepared to submit Plans and Specifications, together with any information that our many years of close application to the Saw Mill Business may have suggested to us, also when required to enter into contract for building and supplying the machinery complete, superintending the starting of the same, and handing over the mill to its owner in first-class running order.

OUR HEAVY SINGLE CIRCULAR SAW RIG, Complete, with or without Top Saw, Rack, Rope or our Improved Steam Feed (Patent applied for), is acknowledged by our leading lumbermen to be a first-class article, got up in the best manner possible, and furnished with Headblocks and Dogs to suit our Customers. We also manufacture a lighter Circular Rig for the smaller class of mills (or where there are two circulars required in the same mill), which is exceedingly smart in its movements, and supplies a long felt want in this direction.

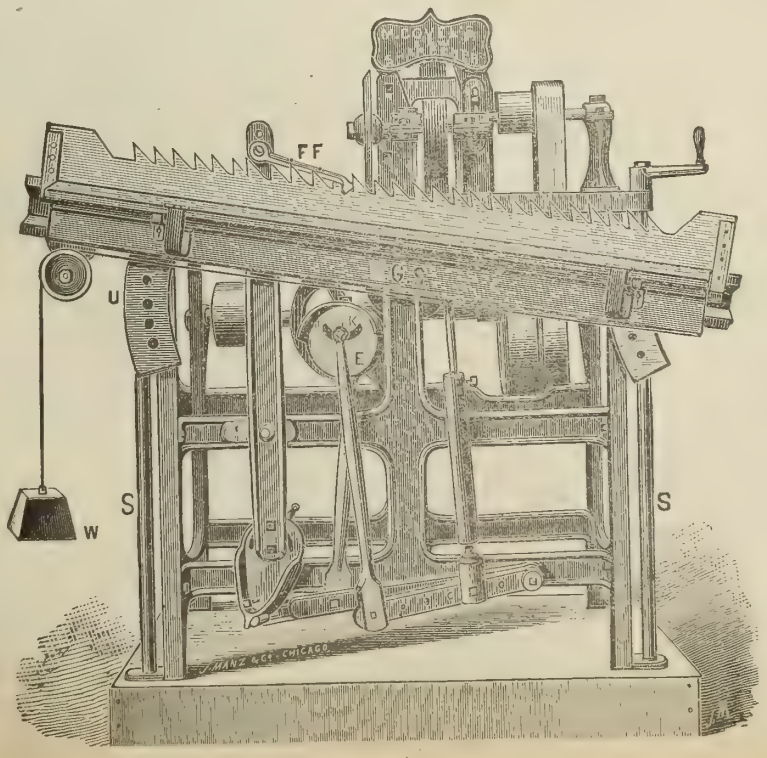
OUR PATENT TWIN CIRCULAR RIG with Rack, Rope, or our Improved Steam Feed (Patent applied for), is now the favourite Machine for Slabbing Logs, and is acknowledged by all to be the smartest and the best Machine for this purpose in the market.

OUR IRON FRAME OSCILLATING SLABBING and STOCK GANGS are fitted up with the most improved Machinery, which for Strength, Class of Workmanship and Design cannot be excelled.

OUR DOUBLE EDGER is the best, most useful and most substantial article of the kind in the Market, which is proven by the number we are called upon to supply; we put on any desirable n umb of saws on the Spindle; they can be arranged to suit the work especially required to be done. We also furnish them with one or two Guages for sawing Scantling or re-sawing Lumber.

Our PATTERN WROUGHT IRON ENDLESS LOG CHAIN for drawing up logs, keeping a constant supply of logs in the mill, and requires, from its construction, very little power to drive it. We have furnished the majority of the best Mills in Canada with this Chain, and many Mills in the United States are using it. We also supply when required Trout's Log Counter (Patent applied for), to count the logs as they are drawn into the Mill. By this simple device the proprietor is able at a glance to know at any time during the day how many pieces have been cut, thus enabling him to judge if the Mill is up to her work.

Our most improved LOG CANTERS for Turning Logs on Carriage. We also furnis h them with Weirs' Patent Incline Attachment for rolling logs from Skids on to Carriage.



We still continue to manufacture

THE

Scovell Saw Sharpener

with all the latest improvements, which Machine has only to be known tobe appreciated.

We also manufacture LATH MACHINES, LATH BOLTERS, LUMBER TRIMMERS, LUMBER MARKERS, SLASH TABLES, TIMBER CANTERS, LOG DECK CANTERS, SHINGLE MACHINES, KNOT SAWS, DRAG SAWS, SHINGLE JOINTERS, BOLTERS, WATER WHEELS, and a variety of the best kinds of Wrought Iron Refuse and Sawdust Carrier Chain (that can be relied on to do their work). Everything required in a first-class Saw Mill.

PETERBOROUGH, ONTARIO.

The Improved CLIMAX Sash Lock

MANUFACTURED BY MILLER BROS., GUELPH.

Holds the sash in any position so that it cannot be moved either up or down, can be put on by anyone, only requiring two screws.

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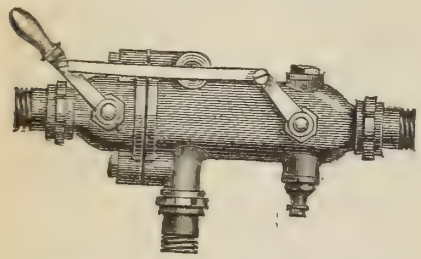
ROBERT MITCHELL & CO.

Montreal Brass Works,

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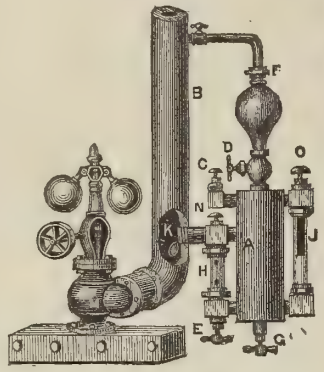
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Acknowledged to be the Best Boiler Feeder in the World.



Will lift 20 feet, and take water at 150 degrees. Only one handle to start and stop. No valve to regulate. CHEAPER than any other Injector in the market. Also, PATENT EJECTORS for conveying Water or Liquids. CIRCULARS ON APPLICATION.

The Continuous Feed Lubricator Saves 50 per Cent in Oil.



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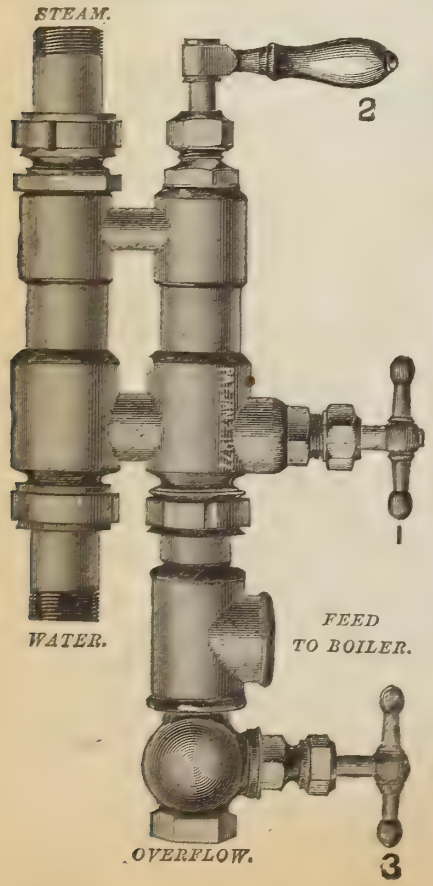
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70 King Street East, Toronto.

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WATER. *FEED TO BOILER.* *OVERFLOW.*

THE

Hancock Inspirator

The Best Feeder known for Stationary, Marine or Locomotive Boilers.

THE INJECTOR PERFECTED!

All Sizes lift water 25 feet. No adjustment required for varying Steam Pressures.

Over 50,000 Now in Use.

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Manufacturers of Inspirators, Ejectors, and General Jet Apparatus.

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THE INTERNATIONAL

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184 Sparks Street, Ottawa.

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32 First Prizes AND 6 MEDALS



AT **HALIFAX** AND **TORONTO,** *1883.*

LUMBERMEN'S TENTS

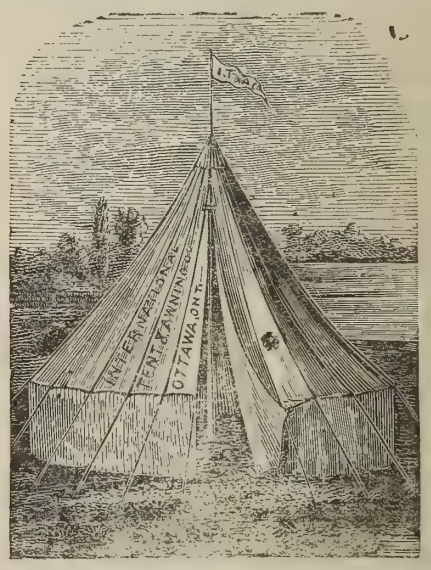
The Cheapest and Best in the Market!

Tents, Flags, Tarpaulins, Waterproof Goods, Camp Furniture, etc., etc.

Estimates for Circus Tents, Range Marquees, Hand-made Sails, etc., furnished on application. Liberal Discount to Large Buyers.

PORTABLE CANVAS BOATS MADE TO ORDER

SEE OUR NOVELTIES IN **Camp Furniture!**



Send for CATALOGUE AND **PRICE LIST!**

At Toronto, Ont., and St. John, N.B., we made the best Display of Tents ever shown in Canada—and we never substitute an article inferior to sample in filling orders.

We control "THE LATOUR PAT." for Camp Furniture, the best on earth. The only Gold Medal ever given for this class of goods was awarded to the Latour Camp Furniture at Toronto in 1882.

SAIL-MAKING.

We have secured the services of the best practical sail-maker in Canada. Orders in this line will receive prompt and satisfactory attention, as is usual with all orders entrusted to us.

Agency for the WILDERMUTH BED SPRING, the best in the Market.

A. G. FORGIE, MANAGER,

International Tent & Awning Co.,

184 SPARKS STREET, OTTAWA.

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The William Hamilton Manufacturing Company, Limited

MANUFACTURERS OF

SAW MILL AND GENERAL MACHINERY.

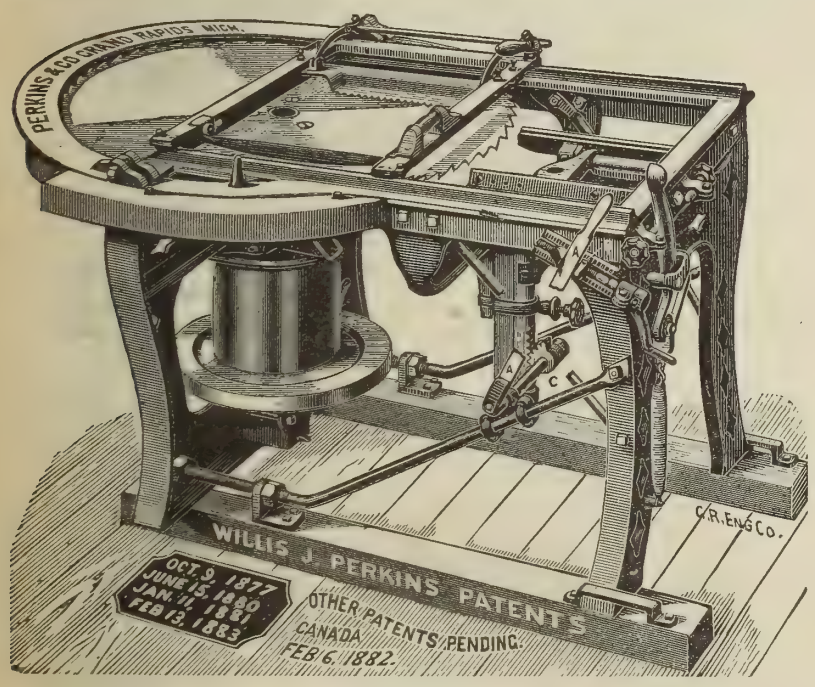
OUR SAW MILL ENGINES are made Strong, Neat and Durable, knowing well the ever varying Strain they are subjected to in driving a Saw Mill.

We wish to call the attention of our Canadian Lumbermen to our First Class HEAVY SAW MILL MACHINERY for Circular Mills and Circular and Gang Mills of the most improved designs. We are prepared to submit Plans and Specifications, together with any information that our many years of close application to the Saw Mill Business may have suggested to us, also when required to enter into contract for building and supplying the machinery complete, superintending the starting of the same, and handing over the mill to its owner in first-class running order.

Besides the variety of Machines we build for the manufacture of lumber we have added to our list the

PERKIN"S PATENT SHINGLE MACHINE.

aving obtained the sole right to manufacture and sell for the ominion. Also Drag Saws, Bolters, Sappers, Jointers and Packers.



GRAND TRIUMPH.

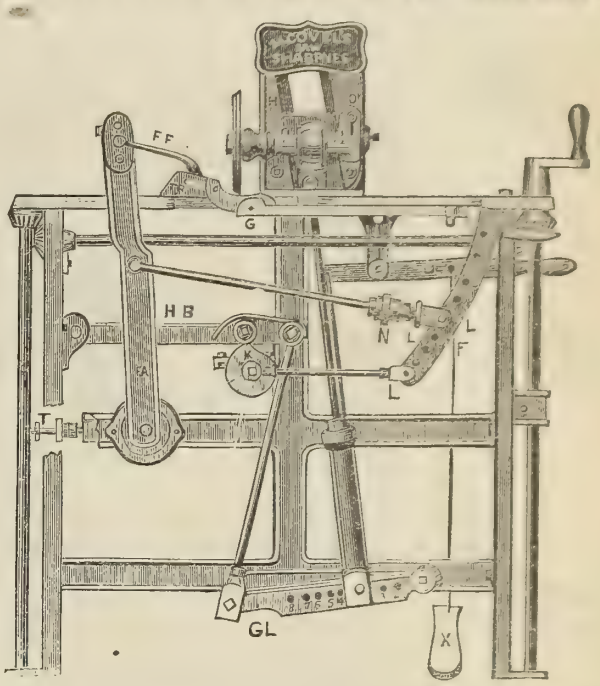
Willis J. Perkins' Drop Tilt !

The only Horizontal Saw Machine on which a thick slab can be cut from the bolt.

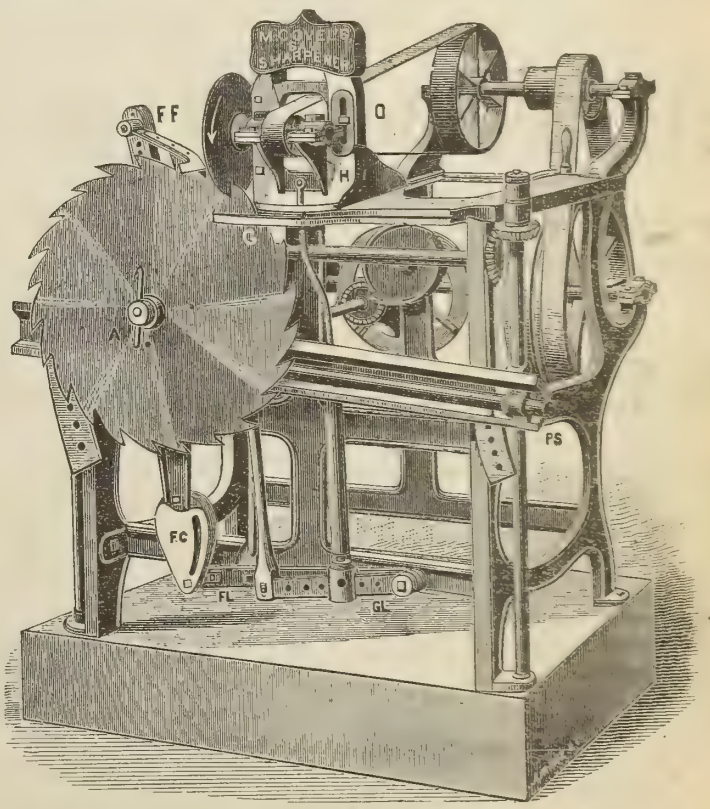
☞ *SECOND CUT ALWAYS A SHINGLE.*

Knots, rots, hearts, bolt squared rift-ways, and all irregularities cut off at one clip. This improvement will pay the price of the whole machine every season by increase of quality and quantity cut.

THE M. COVEL PATENT SAW SHARPENER.



The above Cut No. 1 shows some very important changes that have lately been made, which makes the machines far less complicated for new beginners to operate. Cut No. 2 shows this machine with a circular saw upon it ready for operation.



THE WILLIAM HAMILTON MANUFACTURING CO.

PETERBOROUGH, ONTARIO.

SOLE MANUFACTURERS AND AGENTS FOR THE DOMINION.

Send Stamp for Catalogue and Price List.

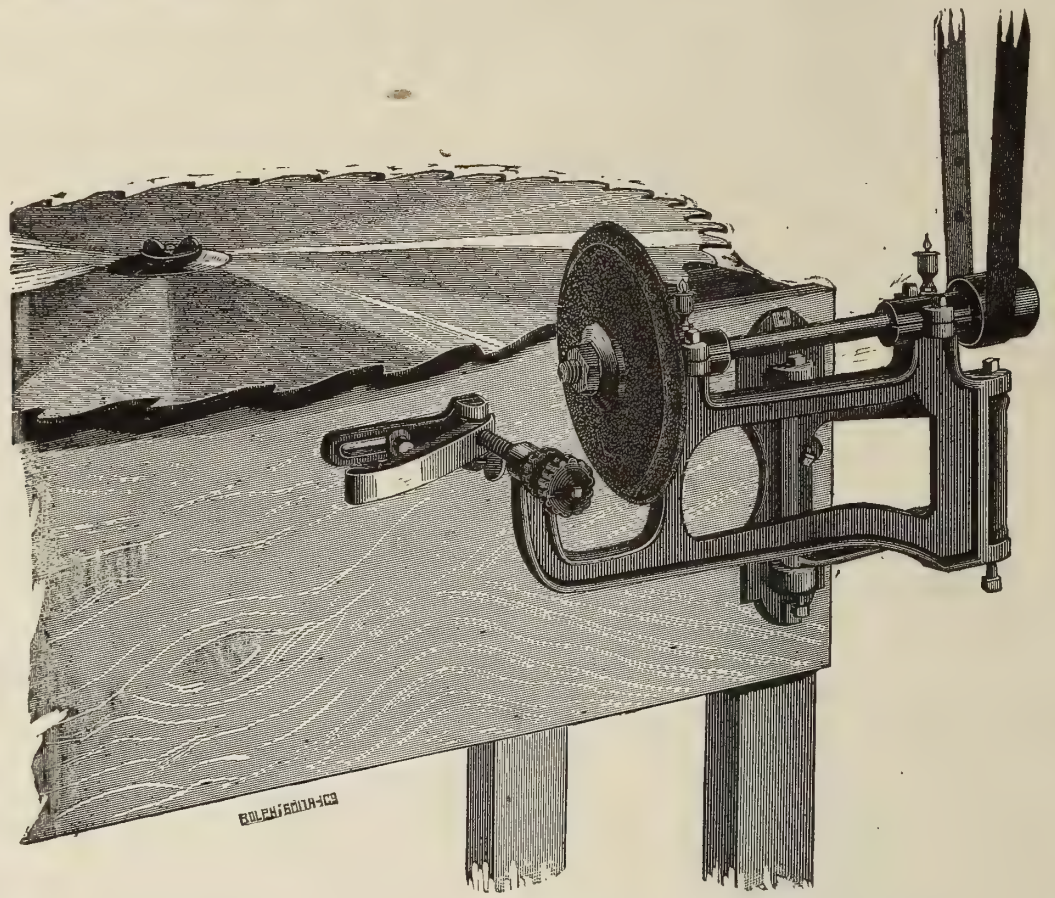
ROGERS' PATENT
SAW GUMMER and SHARPENER

The Handiest Machine for these purposes ever Invented.

Don't Heat!

Cheap!

Very Simple!



Accurate!

Works Fast!

Complete!

Lumbering Season, 1884

Saw Mill Owners in providing for the season of 1884, ought not to lose sight of ROGERS' SAW GUMMER for it will save them more money in proportion to the amount invested than any other machine.

Only $30, including Emery Wheel; Table and Countershaft, $10 extra.

A few of ROGERS' SAW GUMMERS were put on the market last season, and we quote some of the commendations received:

JAS. HADDEN, Foxmead, says:—
"Your machine is all I expected."

CHAS. ANDERSON, Anton Mills, says:—
"I have given it a good trial, and am well pleased with it. 'I find it is one of the indispensables in a saw mill." * *

ROBT. R. WEIR, Orillia, writes:—
"It works like a charm, and is very accurate in its work."

CRONE & PATTON, Hoc Roc Mills, Gravenhurst, says:
"The Rogers' Saw Gummer purchased from you gives "good satisfaction, * * it cannot be beat."

D. DAVIDSON, Pentanguishene, writes:—
"We are well pleased with the Gummer."

W. W. BELDING, Wyevale, writes:—
"I have the Gummer running and it is giving good "satisfaction."

ADDRESS ALL ORDERS TO THE

Hart Emery Wheel Company, Limited - Hamilton, Ont.

☛Manufacturers of Hart's Celebrated Patent Wire Strengthened Emery and Corundum Wheels.

THE CANADA LUMBERMAN

AND MILLERS' MANUFACTURERS AND MINERS GAZETTE.

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM

VOL. 4. PETERBOROUGH, ONT., MAY 1, 1884. NO. 9.

LUMBER DOWN IN MAINE.

This winter's cut of lumber in Maine was very small in indeed. The few logs cut were secured at great expense, which will be increased before they reach the booms by the cost of driving, which may also be unusually difficult, not on acount of lack of water, as in many years, but because of an overplus. On the Penobscot not over 85,000,000 or 90,000,000 feet will be put into the water this spring. This amount added to the old logs on hand will bring the total available stock of lumber at Bangor this year up to 125,000,000 feet, or 65,000,000 feet less than 1883. Many former years have seen a cut of 200,000,000 feet or more on the Penobscot, and less than a hundred million makes the old lumberman sigh and speak regretfully of the "palmy days" gone by.

The principal cause of the falling off of the late years in lumber operations is that, while it costs as much now as ever it did to conduct that work, lumber has been falling in price steadily for some years, and the margin of profit is exceedingly small. Another reason is that new sources of supply are being developed. As regards this particular season, the meteorological conditions were not favorable, there being no snow at all in the first of the season, and too much in the latter part. The teams which went in to save, if possible, some of the timber blown down in the cyclone last fall, came out immediately, reporting that none of the lumber could be reclaimed, as it was found inextricably entangled, trees heaped up for miles like rows of fallen bricks, just as the storm had left them. It would be difficult to estimate the loss caused to the lumber interests of Maine by that gale, but it must have been $250,000.

Lumbermen have to go further for the logs every year, and the axe is making such fearful inroads on the lands near water courses as to cause apprehension among thinking men for the future, when, if things go on as at present, we shall have here on the Penobscot plenty of floods, but no trees.

THE LEAVES OF A TREE.

In a recent lecture Prof. Beal talked about leaves. Among other good things he said: As is well known, a tree cannot grow without leaves. These are put forth every year, and are a contrivance for vastly increasing the surface. An oak tree of good size exposes several acres of surface to the air during the growing season It has been estimated that the Washington elm at Cambridge, Mass., not a very large tree, exposes about 5 acres of foliage, if we include both sides of the leaves. Leaves are more nearly comparable to stomachs than to lungs. A leaf is a laboratory for assimilating or manufacturing raw materials into plant fabric. The normal structure of the leaves, wood and bark of a tree is a complicated subject to treat in the popular way. It requires a vast surface of leaves to do a litt'e work. By counting the leaves on a seedling oak, and estimating the surface on both sides of each, we can see how many inches are needed to build up the roots and stem for the first year. After the first year the old stem of the oak bears no leaves. It is dependent on the leaves of the branches, or its children for support. A tree is a sort of community, each part having its own duties to perform. The root hairs take up most of the nourishment. The young roots take this to the larger ones, and they in turn, like the branches of a river, pour the flood of crude sap into the trunk, which conveys it to the leaves. The assimilated or digested sap passes from the leaves to all growing parts of the plant, and a deposit is made where most needed. If a branch is much exposed to the winds, the base of it has a certain support or certain amount of nourishment. So with the trunk of a tree. If the base of a branch of the main trunk is much exposed to the winds and storms, a much thicker deposit of food is made there. The winds give a tree exercise, which seems good to help make it strong. Our toughest wood comes from trees growing in exposed places. The limbs of a tree are all the time striving with each other to see which shall have the most room aud the most sunshine. While some perish in the attempt, or meet with only very indifferent success, the strongest of the strong buds survive.—*Lumberman's Gazette.*

THE LARGER PART.

Under this title the *Northwestern Lumberman* speaks as follows:—

The greater bulk of the lumber business is apt to be overlooked by the men who consider it from the white pine standpoint. Michigan, Wisconsin and Minnesota are emphatically lumber producing states, and these, in connection with the lumber regions of Pennsylvania and Maine, are erroneously thought by many to include about all there is of the lumber business. When a man has been looking at a mill that turns out 200,000 feet of lumber a day, a small one on some cross roads that cuts 15,000 to 20,000 feet cuts no figure in his estimation. When a person visits the leading lumber producing points in the Northwest and finds from a half dozen to a score, or more, of these large mills at every point, turning out daily enough lumber to build a small city, he is not in a condition to sit down and think seriously of the thousands of small mills scattered through the country. Take for instance the mills of Ohio, New York and Indiana, they outrank in number the mills of Michigan, Wisconsin and Minnesota, two to one, yet the first named states are never spoken of as lumber producing states. North Carolina has twice as many mills as Wisconsin, and four times as many as Minnesota. Kentucky has more than Wisconsin, and Illinois more than Minnesota. The Virginias, in the number of their mills, are ahead of Michigan, and have a mill and a half where the other two northwestern states have but one. Pennsylvania has nearly as many mills as the entire lumber district of the Northwest, yet but few of them turn out pine lumber.

Not to exceed one-third of the product of the mills of the United States is white pine lumber the remaining two-thirds being what is classed in this market as hardwood. Notwithstanding this fact we hear the question asked every day, What would the country do if we had no white pine? It would be in a sorrowful plight indeed, particularly if the supply were cut off at once; still a more pertinent question, and one that has a broader significance, is, What would the country do if it had no hardwood? It would be worse off than without pine, from the simple fact that where one foot of white pine lumber is used there are two feet of hardwood, and that while several kinds of hardwood would take the place of pine if necessary, pine for a thousand and one uses could not supplant hardwood. Houses constructed wholly of hardwood are not uncommon in several sections of the country, and might be built anywhere, but wagons, barrels, handles, and hundreds of other articles that might be named, if made of pine, would be worthless.

It is astonishing after seeing the fights between the bulls and bears in the Chicago market, and the hot competition between white pine dealers in other markets, to note the absence of fuss and feathers in the handling of the immense amount of lumber that represents two-thirds of the entire output. There are but few large hardwood markets in the whole country. Throw out less than half a dozen and there are none left. In these markets there are no hurly burly, break-your-neck business; no public high kicking matinees on the part of manufacturers to see who can elevate prices highest, and no caucuses held by dealers for the purpose of breaking values. Everything moves on in the even tenor of its way. The lumber is usually received and shipped in small quantities. In Chicago, the largest hardwood market in the world, a cargo of about 200,000 feet is about all that any man wants at his yard in a week. If a dealer get out of stock he quietly slides down into Indiana, Tennessee, Missouri, or some other state and picks up what he wants. One mill can stock a Chicago pine yard for a whole season, but the man who runs a hardwood yard must draw from hundreds of mills. There are hardwood yards in this city, the lumber in which came from as many as half of the states in the Union aside from some of the territories.

The methods of distributing hardwood are unlike those of pine. The handler of the latter ordinarily deals either with the retail dealer, or contractor and builder. The hardwood dealer sells in every direction. His customers are builders, furniture manufacturers, agricultural implement and wagon makers, ship builders and a host of others. The pine dealer sells in large lots, and often on the track in his yard may be seen a whole train being loaded at once. The hardwood man can do business in no such way. A big wagon load is a good sale. The manufacturing establishment draw on him as they require a little stock to piece out. A car load is more than one in a dozen of the hardwood men sells at once, in a week.

In the matter of long shipments the hardwood men take the lead. It is not a rare occurrence for hardwood lumber to be shipped from this city to California. A representative of this journal recently saw a pile of walnut in a west side yard that will soon be on the way to Utah, the owner of which will pay $70 per thousand feet for freight charges. A few hundred miles is the maximum distance that supplies for the pine yards of Chicago are brought, while supplies for the hardwood yards are not unfrequently brought a thousand miles.

It is because the hardwood business is widely and generally diffused that it attracts so little attention and makes so little show. Hardwood lumber is needed in every hamlet and city in the country. Brick and stone may crowd out pine, but every wood-working shop makes its complement of hardwood. The farmer who goes to town for building material may be induced to buy poplar, hemlock, spruce or yellow pine instead of white pine, but if he wants a new wagon pole, or plow beam, the hardwood pile is the only resort.

The proportion that the white pine output now bears to that of hardwoods will gradually decrease, for hardwood lumber is being used in building more and more every year, particularly in the older sections of the country, and the production of yellow pine lumber will increase rapidly.

Falling off in Lumber Production.

Advices from Maine and New Brunswick indicate that the yield of lumber in those districts this year will be very much less than that of last year. This year the cut compared with last year, has fallen off as follows: In the St. Croix River disrict, 20,000,000 feet: Penobscot river and branches, 65,000,000 feet: Aroostook and Upper St. John, north shore of New Brunswick and Bay of Fundy shores, 183,000,000; in all a reduction of 268,000,000. Last year, owing to the dry season, a large portion of the lumber cut was not floated, but although this will be utilized this year it will not be sufficient to make up the deficiency.

EDDY BROS. have 4,000,000 feet of logs banked on the south branch of Pine river, and have not yet taken out a log.

GLANDERS.

During the recent session of the Ontario Legislature "An Act to prevent the spread of Contagious Diseases among horses and other domestic animals" was passed, and as its provisions are such that any one owning a horse should be acquainted with, we deem it advisable to place it before our readers entire.

1. In this Act—

"Disease," means glanders or farcy;

"Diseased," means affected with disease;

"Justice," means justice of the peace;

"Court of Summary Jurisdiction," means two or more justices sitting at a court or other public place appointed in that behalf, or a police, stipendiary, or other magistrate or officer however designated, having by law power to act for any purpose with the authority of two justices, and sitting at a police court or other place appointed on that behalf;

"Veterinarian," means a veterinary surgeon, duly registered by the Ontario Veterniary Association;

"Place," means and includes any public highway, street, road, lane, alley, way, or other communication, as well as any public place or square.

2. (1) Where it appears to any person that any horse or other animal is diseased, such person may notify any justice having jurisdiction in the municipality; and the justice, if in his opinion there is reasonable cause therefor, shall forthwith by writing under his hand, direct, a competent veterinarian to inspect the animal alleged to be diseased.

(2) The veterinarian on receiving such direction, shall with all practicable speed make an inspection, and report his opinion in writing to the justice.

3. Where it appears to a veterinarian that any horse or other animal is diseased, he shall forthwith notify the owner or other person in charge of the animal, and shall also give notice to a justice having jurisdiction as aforesaid.

4. All notices under this Act shall be in writing or print, or partly in writing and partly in print, and any notice given to a justice shall contain the name and residence of the owner of the animal or other person in charge thereof where the same are known.

5. (1) After the owner or other person in charge has received notice from a veterinarian that any animal in diseased it shall be unlawful to turn out, drive or lead, or to cause such animal to be turned out, driven or led through any place where it may be brought into contact with or be in danger of transmitting disease to other animals, until it has been determined by the Court of Summary Jurisdiction, as hereafter provided, that the animal to which the notice relates is free from disease.

(2) The justice upon receiving the report of a veterinarian that an animal is diseased may at once issue his order to a constable, directing him to seize and detain such animal, and cause the same to be kept in some place where it will not be brought in contact with, or be in danger of transmitting the disease to other animals, until the case has been determined by the court.

6. The justice, on receiving from any veterinarian a notice or report stating that any animal is or appears to be diseased, shall forthwith issue a summons, directed to the owner or other person in charge of the animal, requiring him to appear before a court of summary jurisdiction, at a time and place to be specified, in such summons, to show cause why the said animal should not be destroyed.

7. The proceedings on such notice and summons shall be regulated by the *Act representing summary convictions before Justices of the Peace*, which shall apply to cases under this Act.

8. (1) In case it appears to the court of summary jurisdiction, by the evidence of one or more competent veterinaries, that the animal in respect of which the summons was issued is deceased, the Court shall make an order for the killing and burying or burning of the animal (described the same according to the tenor of the description given in the notice or report, and in the evidence) within twenty-four hours, and in default thereof may impose a fine not exceeding $100, and a further sum of $50 for every twelve hours thereafter until the same is killed and buried or burned; and all penalties imposed under this section shall be applied to the use of the municipality.

(2) The Court may in any case require further evidence as to the disease, and may for that purpose appoint one or more veterinarians to report to them, and they may thereafter, with or without any further hearing, make such order as may seem just.

9. (1) Every person, having in his possession or under his charge any animal which is or appears to be diseased, but respecting which no notice has been given as aforesaid, shall, as far as practicable, keep such animal separate from other animals not so diseased and shall with all practicable speed give notice to a veterinarian of the existence or supposed existence of the disease.

(2) Any vetertarian shall, on receipt of such notice, with all practicable speed, inspect the said animal, and if the disease appears to exist shall notify the person in possession or charge of the animal, and a justice, as directed in other cases.

10. No owner, or other person in charge, thereof, shall turn out, lead or drive any horse or other animal, knowing such animal to have been kept in the same stable with any diseased animal, or otherwise exposed to contagion or infection, in, upon, or through any place without a license from a veterinarian first had and obtained, or without order from the Court in that behalf.

11. The Court may make an order on the treasurer of the municipality, in favour of any veterinarian acting hereunder, for the payment of such witness fees or other remuneration as may be deemed just, and the treasurer shall pay the sum mentioned in such order to such veterinarian out of such funds he may then have in the municipal treasury; Provided that the said witness fees or other remuneration shall not exceed four dollars each day on which the said veterinarian may be engaged in making any inspection or report, or in attendance at the Court for the purpose of giving evidence under this Act, together with necessary travelling expenses.

12. If any person obstructs or impedes a veterinarian, constable or other officer acting in execution of this Act, he, and every person aiding or assisting him therein, shall be guilty of an offence against this Act, and the veterinarian constable or other officer, or any person whom he calls to his assistance, may seize the offender and detain him until he can conveniently be taken before a justice to be dwelt with according to law.

13. For the purposes of proceeding under this Act, every offence against this Act shall be deemed to have been committed, and every case of complaint under this Act shall be deemed to have arisen, either in the place in which the same actually was committed or arose, or in any place in which the person charged or complained against happens to be.

14. Any person violating any of the provisions herein contained, respecting which no express penalty is provided herein, shall be guilty of an offence under this Act, and shall, on conviction, forfeit and pay a sum not exceeding $100 for each offence.

LUMBERING IN WASHINGTON TERRITORY.

The only escape from the unbroken forest anywhere west of the mountains is to go out upon the water. As this forest is the main feature of the scenery, so it is the chief factor in local wealth. Yet it was not until 1853 that the first saw mill was built here. It had a daily capacity of from eight to ten thousand feet of lumber. Now the aggregate cutting of the mills is over a million feet every day. The area of these vast woods—counting nothing in passes or east of the Cascades—is nearly as large as the state of Iowa, and is estimated to hold 160,000,000,000 feet of timber, not more than three per cent. of which has been sawed or destroyed during the past twenty-five years.

This great timber tract is so penetrated by the ramifications of Puget Sound (as all these waters south of the Strait of Fuca are popularly termed, though originally the name was applied to only a portion) as to make more than 1,500 miles of coast-line, at almost any point of which ships may approach very close to the land to be loaded. Through it, also, flow many navigable rivers, whose banks are not too abrupt to prevent easy handling of logs, which are often chuted down from the lofty ridges directly into the water, and rafted far inland at trifling expense.

The principal growths are fir of two kinds, three sorts of spruce, cedar of two species, larch, and hemlock; in addition to which, white oak, maple, cottonwood, ash, alder, etc., occur. The yellow or Douglas fir, a stately tree often 250 feet in height, exceeds in value and quantity all the others combined, the cedar ranking second. Then comes the pine, 120 to 160 feet in height; the siver-fir, 150 feet; white cedar (cypress), 100 feet; and black spruce, 150 feet. Cedars are known of 63 feet girth and 120 feet height.

The best timber flourishes somewhat back from the mixed forest of the shore, where the foot-hills begin. In such localities the tall and vertically tapering firs, unsurpassed in all the world for size, length, toughness and durability, are peculiarly fitted for naval construction, equalling the Eastern white oak. Hence this wood is used exclusively for ship-building on the Pacific Coast, and is exported for the same purpose to an increasing extent. This is true not of hull material only, for the largest and finest masts and yards carried by the ships of England, France, Germany, China, South America, and to a growing degree in the Eastern United States, come out of these forests. At Port Gamble the visitor is shown the base of the tree that nourished the spars of the Great Eastern; and he is told of the flag-staff, 185 ft in length, and straight as a plummet, which would have been sent to the Boston Peace Jubilee had not a crooked road prevented getting it out in time.

Spars and ship timbers, however, form only a fraction of the business of the mills. The principal demand is for building material of all kinds; and to supply this a vast capital is invested in securing the right to the forest, in cutting the trees, transporting the logs, and sawing the bright, fragrant planks and scantling.

The cutting and hauling out of the logs are usually committed to contractors, who receive about $6 a thousand feet for logs delivered in navigable waters, the mills always buying logs in preference to encroaching on their own property. A contractor's method is to hire six or eight men, and provide several yoke of oxen. He builds a rude camp in the place chosen for chopping, and boards his crew who are paid from three to five dollars a day, and will produce perhaps 30,000 feet of logs daily. These are hauled out of the woods by the ox teams, or by windlasses, or (in few localities) by short railways, and are slid into the water of river or sound, where they are made up into rafts, and towed by powerful tug-boats to the mill. The general length of the logs is twenty-four and thirty-two feet; but sometimes logs of one hundred feet are prepared for special purposes.

As fast as needed, the logs in the boom at the mill are seized by the iron grappling-dogs of an endless chain, and drawn up an incline into the mill, where cross-cut, rotary, circular, and gang saws, planing and lath machines, convert it into every variety of lumber. The slabs are utilized somewhat in making fence pickets for that sort of small palisade called in Louisiana *pien*; the sawdust and refuse, beyond what the engine furnaces can make away with, are burned, or stacked solidly at the water's edge, and underneath wharves as "filling."

The lumber that enters into the commerce of Puget Sound is mainly the product of eight mills, exclusive of those at Burrard Inlet, British Columbia, which saw enough to load 50 vessels a year, their cargoes aggregating over thirty millions of feet. Since the great depression in the lumber business a few years ago a powerful combination has closed many mills by subsidies. Of the largest, however, Port Discovery, Utsaladdy, Port Madison, Port Blakeley, Seabec, and Tacoma are all in operation. At Port Ludlow we found nearly ready for work a mill larger than any of the foregoing, or, for that matter, of any on the Pacific coast, since by the time this article meets the reader's eye it will be able to turn out 250,000 feet of lumber daily.

All these mills are on tide-water, and own fleets of steam and sailing vessels for the carriage of their surplus product, while also supplying the cargoes of vessels sent hither. The largest of them will employ 150 or more men in and about the mill, and perhaps 250 in the logging camps, their combined patronage giving a livelihood to several thousand persons, and sustaining half a dozen villages, which otherwise would not exist, where trade thrives, agricultural centres, schools and churches arise, and the roots of a civilized community are planted.

In the case of ports Discovery, Ludlow, Gamble, Seabec, Madison, and Blakeley, the villages are literally owned by the mill companies. The land was bought before the saws were set up, and houses built for the families of the force, with offices, shops, hotel, etc. These houses are rented, or else are furnished free, and less wages paid. The supply stores, too, are managed by the mill owners, who thus control everything in the settlement.—*Earnest Ingersoll, in Harper's Magazine.*

BUYING UP BLACK WALNUT.

Unusual quantities of black walnut lumber says a recent Buffalo, N. Y., telegram, have been passing east from points in Ohio, Indiana and Iowa for some weeks past. The shipments have attracted attention among lumber dealers, and it is learned that a company of English capitalists, with whom a wealthy combination in Indianapolis is co-operating, have been for a year and more quiety getting possession of all the black walnut timber it has been possible to buy, and are now shipping it to England. The writer's informant, who was a buyer for those parties, says that the traveller on the railroads through the walnut belts will see at nearly every important station portable steam saw mills at work early and late ripping up black walnut logs into planks of a convenient size for shipment.

The company has had buyers out all through the States mentioned gathering up walnut trees wherever they could be found. In many cases the farmers have disposed of their trees at prices far below their value, and it has only been recently that they have become aware of the scheme that is to take out of the country the most of the remaining black walnut timber in it. The consequence is that all the walnut the company now buy costs them double the price they were paying a few months ago.

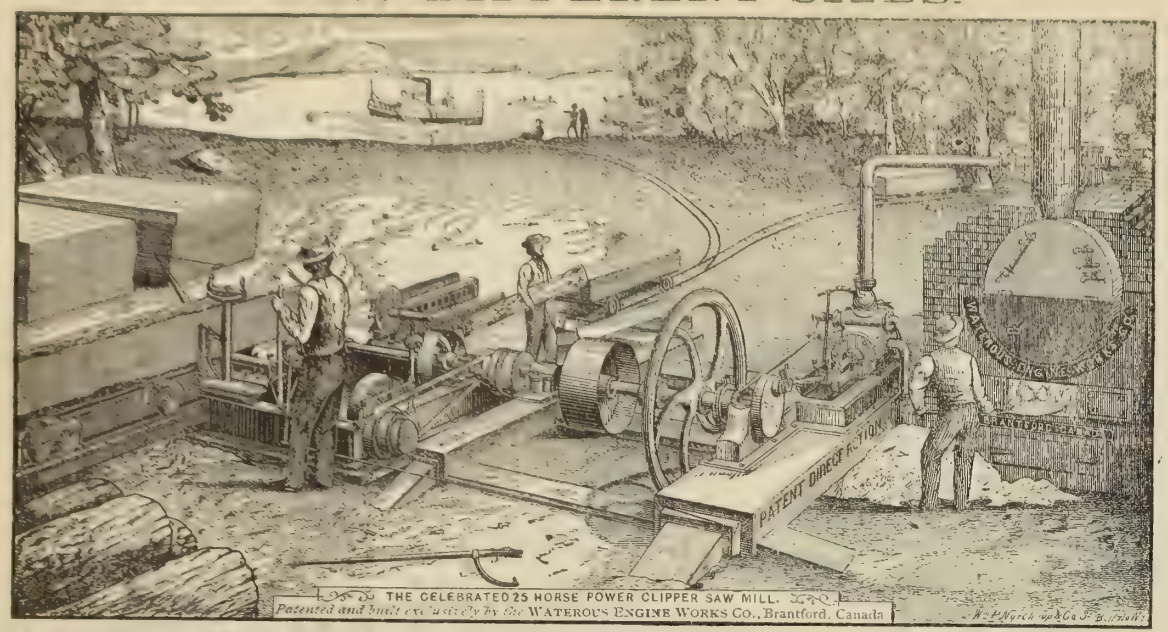
"If the original forests of Ohio and Indiana were now standing," says the gentleman referred to, "their valuation would be many times more than it is to-day under improvement. In making their farms the settlers in these States destroyed millions and millions of dollars' worth of black walnut, and the destruction ceased not more than 20 years ago. In searching for timber I visited more than one farm where miles of fence were laid with walnut rails and the fences are not old ones at that. This was in Bartholomew county, Ind., which, with Jennings county, contains about all the walnut forests that are left in that State. One old farmer told me that he worked alomst incessantly for eight years to clear away the walnut trees on his farm, and that he burned up more than 80 acres of the finest kind of timber. His farm, after 30 years of cultivation, could not be sold for more than $8,000. If it had its walnut trees back it would be worth more than $100,000. This farmer was an old settler in the State, and only one among hundreds of others who, for more than 50 years, girded and cut and burned the great forests they found occupying the land. The English company will send to England probably $5,000,000 worth of walnut that they have purchased from the farmer at almost nominal prices."

THE second volume of the census of Canada, for 1881, has just been issued. The number of lumbermen in the Dominion at that date was 9,930 against 8,094 in 1871.

CURE FOR RHEUMATISM.—Sufferers from either acute or chronic rheumatism will find no more ready relief or better cure than Hagyard's Yellow Oil, the popular household remedy for external and internal use in all painful affections.

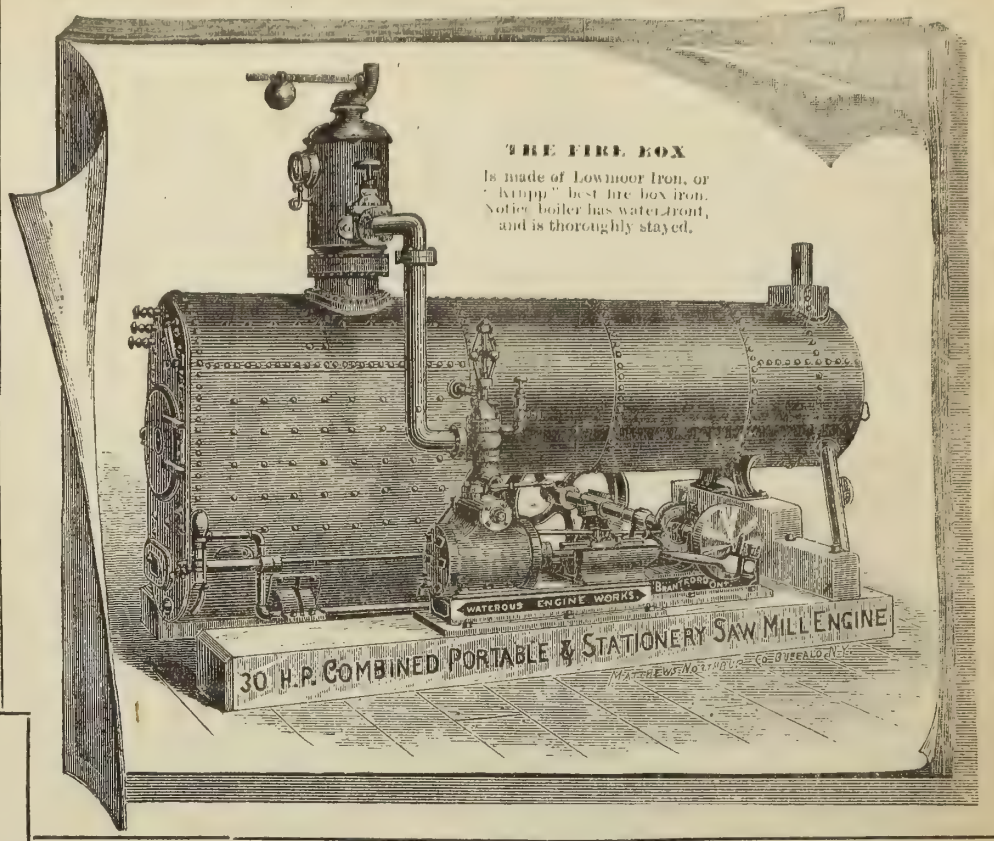
Semi-Portable and Portable Direct Action and Belted Saw Mills!

TEN DIFFERENT SIZES.



Above cut rep esents **Our 25 H. P. Patent Direct Action Mill** which we guarantee to cut 8,000 to 12,000 feet of lumber per day of ten hours, and to be the most efficient, economical and durable mill built in America, and will saw lumber cheaper per thousand than heavy large size belted or gang mills. For over a quarter of a century the leading pioneer mill of Canadian settlers. ☞Specially constructed for hard work.

☞This Cut represents the Engine furnished with Nos. 8, 12, 16 and 18 Saw Mills.

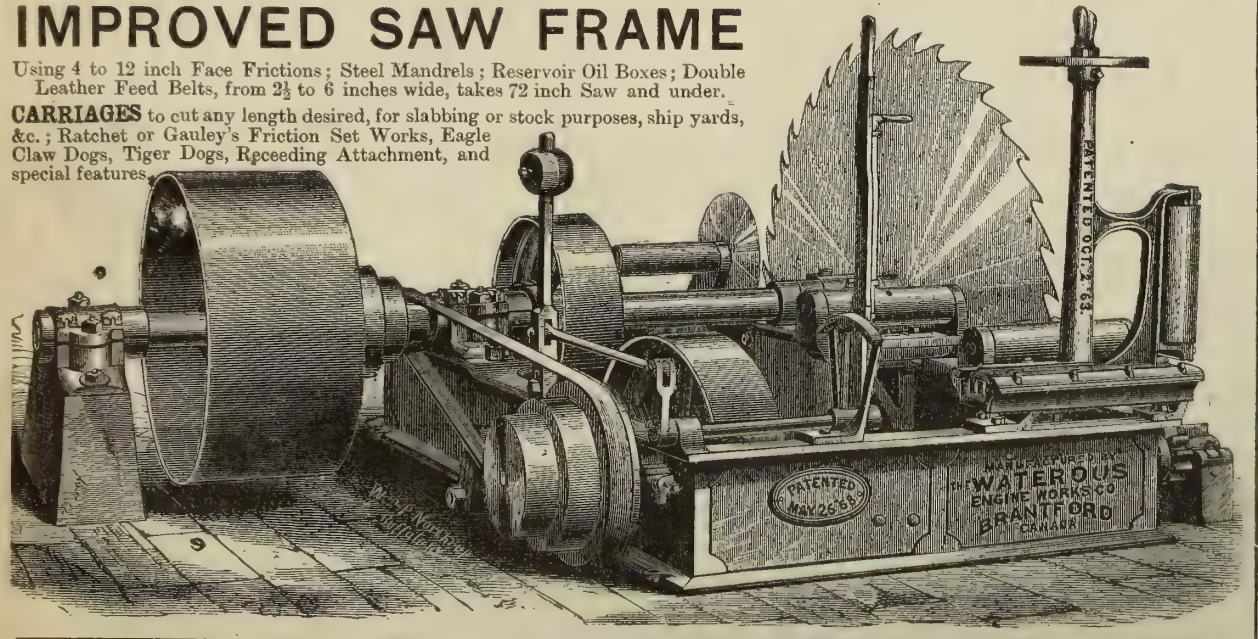


A. & P. White, Pembroke, have one of these 30 H. P. mills at Deux Rivieres, C. P. R. R.
G. C. V. Hall, Quebec, has one of these 3 H. P. mills at St. Agnes, Quebec.
Also, W. & R. Wallace, Gardner's Creek, N.B., with 60 foot Ship Yard Carriage.

IMPROVED SAW FRAME

Using 4 to 12 inch Face Frictions; Steel Mandrels; Reservoir Oil Boxes; Double Leather Feed Belts, from 2½ to 6 inches wide, takes 72 inch Saw and under.

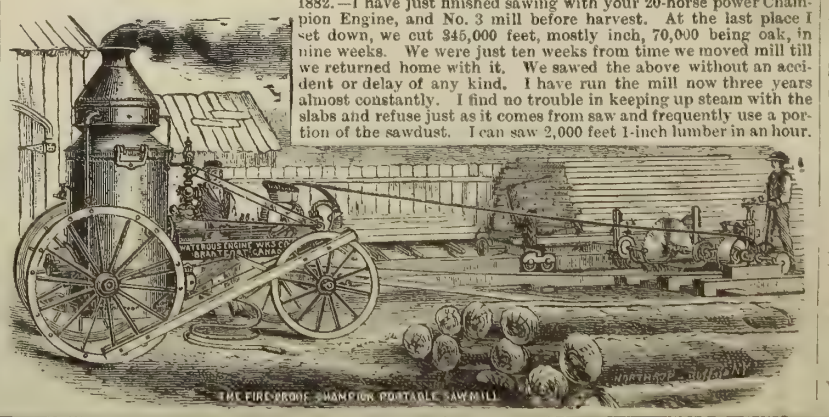
CARRIAGES to cut any length desired, for slabbing or stock purposes, ship yards, &c.; Ratchet or Gauley's Friction Set Works, Eagle Claw Dogs, Tiger Dogs, Receeding Attachment, and special features.



Champion Portable Saw Mills

12, 16, and 20 H. P.

GEORGE BOOK writes as follows:—"ST. ANNS, ONT., July 27th, 1882.—I have just finished sawing with your 20-horse power Champion Engine, and No. 3 mill before harvest. At the last place I set down, we cut 345,000 feet, mostly inch, 70,000 being oak, in nine weeks. We were just ten weeks from time we moved mill till we returned home with it. We sawed the above without an accident or delay of any kind. I have run the mill now three years almost constantly. I find no trouble in keeping up steam with the slabs and refuse just as it comes from saw and frequently use a portion of the sawdust. I can saw 2,000 feet 1-inch lumber in an hour.



The following are a few who have bought these mills:—

Canada Pacific R. R. Co.
G. B. Hall & Co., Que. (2)
Dominion Land & C. Co. Sherbrooke, Que. (2)
Sorel R. R. Co., Que. (2)
Cochrane Ranche Co. Bow River, N.W.T.
Nor.-West Milling and Mining Co., Bow River, N.W.T.
Toronto and Nor.-West Colonization Co., Near Brandon.
Morton Dairy & Farming Co., Turtle Mountain.
Allan Grant, Ottawa.
Geo. Perley, Ottawa.
Michipicoten Native Copper Co.,
W. W. Stewart, Montreal

Double Edgers, 2, 3 and 4 saws; Automatic Lumber Trimmers, 5 to 9 saws each; Log Turners, Slash Tables, Log Jacks or Haul-up of all Capacities, Endless and Single Chain; Automatic Log Rollers, Transfers, Live Rolls, Shingle Machines, Drag Saws, Knee Bolters or Block Splitters, Shingle Packers, Gang Lath Mills, Stave Machines, Automatic Sawdust Feeders for Gangs of Boilers, Sawdust, Slab and Refuse Conveyors, Elevators, Pickering Governors, Worthington and Blake Steam Pumps, American Planing and Matching Machines, American Saws, Solid and Inserted Tooth, Extra Thin Circular Board Saws a specialty, Swages, Gummers, Emery Wheels, and all kinds of Saw Mill Furnishins kept in stock.

WATEROUS ENGINE WORKS CO., Brantford, Canada.

Send for New Price List and Illustrated Circular, of special interest to saw-mill men. ☞Mention this Paper.

NEW WOODS FOR CAR BUILDING.

Under this head the *National Car Builder* says :—"We print on another page a description of some of the valuable wood products of Cuba, compiled from an elaborate article by Esteban D. Estrada, M. E., in the November and December numbers of *Van Nostrund's Magazine*, and including a series of tests made under the supervision of Professor Thurston at the Stevens Institute of Technology.

With the exception of mahogany, rosewood, satin wood, cocoabolo and a few other varieties that are used in cabinet work in this country, our knowledge of tropical woods is very limited both as regards the distinctive qualities of many kinds and their peculiar fitness for constructive purposes. Mahogany is practically the only wood that is used to any extent in the United States for other than strictly ornamental purposes. Lignum vitæ, it is true, is used for sheaves of blocks and in other ways in which a hard, tough and durable wood is required to resist wear. Mr. Estrada's knowledge of the timber trees of Cuba probably enabled him to select for testing those only that could be imported to this country at prices that would admit of their being used with advantage and profit in our wood consuming industries. The tests included a large variety of woods, many of which were more suitable for furniture and inside finish than for construction where strength and durability are the chief essentials. There were some, however, who exhibited these qualities to such a degree as to render the timber useful for car sills, especially as the trees are of a sufficiently large size. It is also probable that some of the varieties of smaller growth might be used for posts instead of ash or pine, since they have much greater strength and a little more weight.

The stiffest and largest of the timbers described is the *inqui comun*, which has a specific gravity of 1.20. The tree grows to a height of from 50 to 70 feet, and the timber can be obtained with a maximum section of 18 inches square. It is very hard, fine-grained and compact, has a rosewood color, and becomes harder and darker with age, while its strength is greater than that of any American woods used in the arts, and its resistance to compression is even greater than lignum vitæ.

Another of the Cuban trees which seems deserving of the car builder's attention is the *dagame*, which is found in great abundance in the forests. It grows straight, has but few branches and attains a height of 40 to 50 feet. The wood has a pale yellow color, is moderately heavy and its texture resembles boxwood, can be worked either across or with the grain and and takes a good polish. The largest sized lengths that can be obtained are 12 inches square. It is very strong and rivals the *inqui comun* in elasticity and stiffness, besides being much lighter. Its specific gravity is only ·90, which is about the same as that of English oak and but little more than that of our own white oak, which is ·86. So far as can be judged from the description it might be used with advantage for endsills and posts in car work. We are not told how it behaves in drying. In Spain it is used for many of the purposes for which hickory is used in the United States.

The *baria* is a wood of a greenish-brown color, weighs 48 lbs. per cubic foot and has a specific gravity of ·78. The tree grows to a hight of 60 feet, and has a diameter of 18 inches. This timber is used in framing and carriage making, and might very probably be used to advantage in car construction.

The *sabicu* is described as one of the largest of the timber trees of Cuba. Although it attains colossal dimensions it is somewhat crooked, but yields an excellent timber 30 and 40 feet in length, and from 30 to 40 inches square. It is hard, heavy, strong and durable, works well either across or lengthwise the grain, and is used in Cuba, Spain and England for keelsons, engine bearers, ties, piles, posts, beams, etc. Its strength, or stiffness rather, is quite equal to that of any of the woods above mentioned, and although these are not the strongest nor in every case the stiffest of the Cuban woods, their characteristics are such as to invite further investigation.

Experiments were made with 15 varieties of wood, by subjecting the specimens to torsional and compressive strains. The results are quite remakable, and the only question seems to be whether these woods can be delivered at our ports at prices that will warrant their importation. Dealers in mahogany and other fancy woods can doubtless throw some light on the subject. At all events it would seem to be worth the trouble to find out what would be the cost of obtaining sample lots for trial. It should be noted that while the tests show that the weight of these Cuban woods considerably exceeds that of our native timber used in car construction, their average native strength is much greater, so that the alternative is presented of using the same weight and obtaining more strength, or retaining the same strength by reducing the weight. The quality of some of the specimens is such as to make it probable that they might be used to good advantage for the draw-timbers of freight cars."

SWEDEN.

The Stockholm correspondent of the *Timber Trades Journal* writing March 22, says :—The vanishing of the snow and the breaking up of the ice-roads has put a stop to driving operations in the woods at an earlier period than usual. With the exception of the Lijusne and Woxna rivers (supplying Soderham district) I have strong reasons for asserting that the "get" of logs will be considerably less this winter than that of the two winters immediately preceeding ; although it is probable the production of logs on the two rivers indicated may not have been large, my belief is that it has been greater than the prospects of business warranted.

I hinted in my last advices the probability of there being a scarcity of water for floating operations in spring. The weather of the past fortnight has considerably strengthened this probability. Under the combined influence of a high temperature and a sun more like May than March by far the larger portion of the snow has already disappeared from the forests, without being of any service to floating operations, which latter, as is well known, cannot be prosecuted until the ice has disappeared from the small inland lakes. A wet spring can, of course, neutralize the effects of a want of snow now, but the chances for the moment are decidedly against there being an average floating season.

The heavyconsumption of sawn wood in London and small stocks is attracting considerable attention in the north of Sweden. Prices of the better qualities of redwood deals may be characterized as firmer, and althogh few sales of such goods at shippers' figures are reported, millowners have come to the conclusion that it is only a question of time when importers will be obliged to come into the market, *i. e.*, supposing consignments are not resorted to. There is apparently some fear that consignments may be indulged in from the Sundswall and contiguous districts to London, and as long as this is supposed to hang like a Damocles' sword over the heads of importers, so long may they be expected to refrain from buying.

How far the rumour is warranted I am unable to say. The basis of £10 10s. for 1st quality red 9 in. deals and boards is being generally obtained for good Sundswall marks in France and Belgium, with the usual reduction for the lower qualities, but complaints are being made here and there that some of the agents are selling battens and small boards cheaper than the price list agreed upon, and proportionately lower than deals. Prices of whitewood are very irregular and more or less dependent upon the position of the seller. The price list for whitewood deals from Sundswall and Hernosand was originally 150 francs, as falling from saw, but large parcels have been quitted at considerably lower price than this, probably 15 francs less. The stock of whitewood goods of all sizes is evidently—and this in a greater degree than redwood—far too large for the consumption. Very considerable sales of Finnish goods are now reported from France, but prices are understood to be low ; as low, if not lower than last year. French buyers are, on the othar hand, buying very sparingly of Swedish goods, and not the slightest sign of speculative purchases is to be discerned. Several cargoes of red deals from Soderham, Sundswall, and Ostio district have lately been placed for Australia, and other parcels are in course of negotiation. Prices are said to be somewhat under list.

The great development of the trade in planed goods between Norway and Australia (principally Melbourne) is attracting attention amongst the Swedish owners of planing mills, and it is not unlikely that one or two of the latter may enter the field this season.

Australia is no doubt one of the most promising fields for the sale of manufactured wood, and is increasing its consumption annually far faster comparatively than any European country.

The market is quite glutted with steam tonnage of over 300 standards capacity, and it is just questionable whether the above figures can be again repeated for f.o.w. Small sailing bottoms of 100 standards and under are somewhat more in request for the outports, and whenever suitable sized vessels can be had for particular orders that may be on hand fair rates can be obtained. Several handy steamers of a carrying capacity of 200 to 250 standards deals, burning little coal and only drawing from 12 to 13 feet of water when loaded, are now being fitted out on the Clyde. These boats, which are very suitable for the deal-carrying trade can be bought cheap.

FOREST DESTRUCTION AND CONSERVATION OF MOISTURE.

The Glens Falls *Republican* of a late date contained the following :—.

"Mr. William Moore, who lives at the head of Thirteenth pond, 10 miles above North creek, Adirondack region, and who has spent the better part of a lifetime in lumbering, says it is better for the forest to cut off all the larger trees once in 20 years, as they mature, so as to give the smaller growth a chance to live and thrive. He declares that the destruction of the woods is occasioned more by the fires of camping parties and hunters than by the axe of the choppers. These fires, spreading as they do over a vast extent of territory, not only burn the standing timber but the small trees and the underbrush as well, even reaching into the earth, destroying the roots and literally consuming the mould-covering which contains the seed-germs. These fires, lasting for days and sometimes weeks, consume the roots and fibres and seed absolutely, especially on the thin, rocky soil, down to the bedrock, and years upon years are required to reproduce the germinating material. 'Which do you think,' said Mr. Moore, 'will retain the most moisture, the tall forest or the underbrush? If there is a particularly thick growth of large timber to cut we leave it till the last—until the end of winter—and then going into it find a comparatively thin covering of snow. The balance, falling upon the tall trees, has been blown away by the wind or melted by the sun. So you see the small timber—the undergrowth—is the best protection to the snow and the rain, retaining the moisture and gradually allowing it to run into the large streams. I tell you, keep those who start fires from the wilderness and it will take care of itself.' 'What do you think of the project to build reservoirs and dam the lakes?' 'That is practicable. Indian lake alone could be made to furnish a vast supply of water in dry times, and without any harm. The idea that it would destroy timber and breed distempers is much of it nonsense.'" These views, coming as they do from a practical, experienced lumberman, are worthy of consideration. There are always two sides to every question.

Forest Fires.

"When a forest fire occurs in the pineries of Michigan," said a lumber operator from the State, "the pine trees on the burned tracts must be cut within a year if the owner wants to get marketable lumber out of them. The heat of a spent forest fire is not yet out of the air before millions upon millions of large brownish-white moths appear. One hour there may not be a moth anywhere about ; the next hour the air will be filled with them. They lay the eggs that produce a worm that bores into the pine trees, honey-combing them with tunnels that ruin them in a few weeks. I have seen these millers covering an area of 10,000 acres of burned woods. "When the rebellion broke out forest land could be bought in Michigan for less than $2 an acre. I purchased 5,000 acres in 1860 for $9,000. Last month I sold the tract for $250,000. I think the biggest pine tree in Michigan is on that property. It is 11 feet through at the butt, and must be 150 high. A New York man once offered men $100 for 15 feet of the trunk from the ground up. He wanted to exhibit it during the Centennial Exhibition in Philadelphia. I refused the offer. Michigan now produces one-quarter of the pine used in the country. Over $160,000,000 a year is received by the operators for the product of her forests. In ten years from now, however, there will be very little, if any pine left in the state."

Failures in the States.

Business failures in the United States for the week ending March 31, as reported to *Bradstreet's*, numbered 143, against 162 in the preceding week and 190 in the corresponding week of 1883. About 83 per cent. were of small traders, whose capital was less than $5,000, and if through the country the general character of these was similar to those reported from Chicago, trade is relieved from considerable of an incubus, in the weeding out of firms and companies who have been doing business of a doubtful legitimacy. Of the lines of trade mentioned as having contributed to the list the lumber interest proper is not considered worthy of mention; but the furniture trade is credited with four failures. In summary for the first three months of 1884 the lumber trade registers 25 failures. Of these the manufacturers contribute 11 ; one in the middle states, six in the southern states and four in the western states. Of wholesalers, one in the eastern states, three in the middle states and two in the western states. The retail trade, the country over, during the same period contributed eight.

World's Fair at New Orleans.

The work in the construction of the main building for the World's exposition to be held at New Orleans is progressing very rapidly the lumber being delivered on the grounds at the rate of 100,000 feet daily. It is estimated that the main building will be finished in four months. The management announces that exhibits will be received on the 1st of August. Applications for space have been received from England, Russia, Germany, Austria, Italy, Mexico, Canada, Venezuela, Gautemala, Honduras, etc. Florida's commissioner has applied for 50,000 feet of space for horticultural exhibits, and for 100,000 feet of space for a Florida garden and a special building. Colorado's commissioner brought the first instalment of Colorado's mineral display, consisting of 400 specimens from various mines in Colorado. The fair will open next fall and continue through the winter.

Jarrah Timber Again.

Jarrah timber, which has been coming into public notice lately, is by no means a new introduction, the wood having been employed for many purposes by cabinet makers and others, with whom it has a high reputation. Its principal use, however, is the making of curves for house and marine architectural drawing, etc. ; in fact, no other wood is considered its equal in this respect. The resistance to atmospheric influences in all delicately made material of this description, where accuracy is so vital, is one of the greatest importance, and the attributes of Jarrah timber seem to give it special advantages for this work over all other kinds.—*Lumberman's Gazette.*

THE Province of New Brunswick intends to make a fine display of native woods at the International Forestry Exhibition to be held in Edinburgh this summer.

THE legislators of the United States are becoming increasingly alive to the duty resting upon them of preserving the forests. The Edmonds Bill provides that a tract in Montana of nearly 7,000 acres shall be forever set apart for the keeping of the forests in which arise the sources of the main stream of the Missouri and of Clark's Fork of the Columbia, and their tributaries. Provision is also made for placing the region under executive custody, and for the punishment of depredations on it.

THE ENGLISH MARKET.

Robert Coltart & Co.'s Liverpool circular of April 1, says;—The most satisfactory feature in our trade, is that in spite of the continued complaints about dull trade and poor demand, the consumption of wood during the past month compares very favorably with the same period during the last two years; prices, however, continue very low, and buyers are supplying themselves from the cargoes shipped on consignment to this market, rather than enter in to contracts for future delivery. The arrivals during the month have consisted chiefly of pitch pine and Norway flooring boards, both of which articles have been sold at extremely low rates, and as the prospects for future arrivals are not encouraging, it is to be hoped that shippers will curtail their supplies to this market.

COLONIAL WOODS.—The stocks of both square and waney pine continue heavy as compared with the same time during the last few years. The consumption, however, shows some improvement, amounting to 89.000 feet, against 65,000 feet last year; the sales have been by retail only. For red pine the demand is very dull, and there are no transactions to report. Of ash the stock is ample, and there is very little enquiry. The stock of elm amounts to only 10,000 feet, and the consumption during the month consisted of 3,000 feet. The consumption of oak has been on a reduced scale, and the stock is ample for all requirements; there are no wholesale transactions to report. Birch has been in fair request during the month the consumption amounting to 30,000 feet; the present stock consists of 50,000 feet. Of N. B. and N. S. spruce deals the consumption shows a considerable falling off, amounting to only 1,820 standards, as compared with 3,044 standards during the same period last year; the arrivals have been small, but the stock is ample, viz., 16,247 standards, against 12,614 standards at the same time in 1883; the sales have consisted chiefly of small parcels and a cargo from Halifax, which was sold at £6 12s. 6d. per standard ex quay. Lower port pine deals continue in dull demand; by auction a Richibucto parcel realized £11 15s. per standard for first quality, £8 per standard for 2nd quality, and £6 to £6 5s. for 3rd quality. Of Quebec pine deals, 563 standards have been imported during the month, via Portland; the consumption amounted to 997 standards, against 892 standards in 1883. The present stock is heavy for the time of the year. For Quebec staves the demand is dull. Of palings there are no sales to report.

The arrivals since our last have been 45 vessels, 25,163 tons, against 42 vessels, 21,182 tons in corresponding period last year, and 20 vessels, 14,781 tons in 1882.

From 26th January to 31st March, 1884:—

	Vessels.	*Tons.*
Quebec	8	750
St. John, N. B. &c	4	3,655
United States	17	12,942
Baltic	31	14,443
Total	60	32,840

From 26th January to 31st March, 1883:—

Quebec	..	
St. John, N. B. &c	4	3,655
United States	6	5,001
Baltic	40	17,530
Total	50	26,374

A QUESTION TO THE POINT.—Reader, have you a languid, weak and tired feeling, with nervous exhaustion, especially in the early spring? Then your liver is inactive and circulation poor. Arouse the torpid liver, clense the sluggish blood and regulate the secretions with that purifying tonic Burdock Blood Bitters.

WEATHER PROBABILITIES.—Foretelling the weather is uncertain at the best, but it is certain that if you catch cold in this changeable climate you can best break its ill effects by Hagyard's Pectoral Balsam, the most reliable and pleasant remedy for coughs, colds, bronchial, and lung complaints. It is so agreeable that even a child may take it.

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THE cotton manufacturers at the South, in a meeting recently held at Augusta, Ga., resolved to curtail production until the plethora in the market shall be somewhat reduced. All manufacturers other than saw mill owners appear to know that when they have over produced their respective lines of commodity, so that a glut in market occurs, they must stop adding to the pile.—*Northwestern Lumberman.*

A SANGUINE lumberman has developed himself in Central Wisconsin, who talks in a fashion that proves that he has a happy faculty of getting on the silver side of a cloud in every instance. Hundreds of lumber holders would like to borrow his glasses: "Buyers are thick and plenty, and the stock on hand entirely inadequate for the spring trade. Hardly a firm can fill the most ordinary mixed order entire, and the large number of buyers from Chicago and other large lumber points indicates either that their stocks are broken or that we are selling too low. I predict that upper grades will advance, will be scarce, and the better part of common drawn on largely to to take the place of the shortage of select. Lower grades of common should in sympathy, at least remain firm at present prices.—*Northwestern Lumberman.*

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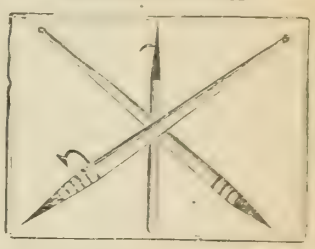
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The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., MAY 1, 1884.

IN Victoria, Australia, a tree has been found that measures 485 feet in length.

INDICATIONS point in the direction that Kansas and Nebraska will be the banner states for the lumber dealers this year.

THE forests of the United States are estimated to cover 380,000,000 acres or sixteen per cent. of their total area.

IT is said that a syndicate of English capitalists have bought up nearly all the black walnut in the western states for shipment to Europe.

EXPERIMENTS are being made with every prospect of success, to manufacture handsome, serviceable and waterproof boots and shoes from wood paper.

ONE cord of wood makes one ton of excelsior. A concern at Milo, Me., uses up 1,800 cords of wood a year. The same house converts 1,600 cords of white birch into spools.

AN estimate, as near as can be made, of the cut of logs on the Androscoggin river, Me., is 30,000,000 feet, a decrease of 15,000,000 from the cut of last year, which was 45,000,000.

DURING the month of March the Eau Claire Pulp & Paper Company made 220,000 pounds of paper, 153,000 pounds of pulp. Of poplar, spruce and basswood 128 cords were used.

AT Silver City, Alberta, Canadian Northwest, building is active. Sixty houses are in course of construction and there would be many more if it were not for the scarcity of lumber.

THE Export Lumber Company, New York, reports that the export of pine lumber from the port of New York for the three months of the year ending April 1, was 19,991,000 feet. For the same months of the year named the amounts were as follows:—1883, 14,956,000; 1882, 11,277,000; 1881, 14,511,000; 1880, 13,550,000; 1879, 12,670,000; 1878, 10,411,000; 1877, 12,579,000.

A BRIGANTINE is being built at Dorchester, which, when completed is to be loaded with lumber and general cargo and sent to the Fiji Islands. This is a new venture, says the Moncton *Transcript*.

A HALIFAX daily states that the saw mill of Messrs. Davidson & Sons, at Bridgewater, the most extensive lumbermen in Nova Scotia, will be extensively employed this season in cutting lumber for foreign markets.

AN effort is being made to start a wood pulp factory at Albert, N. B., having the fine water power of the Hopewell Mill Company. Mr. Andrew Anderson is active in the matter and it is to be hoped his efforts will be successful.

A STRIKE among the shingle mills has taken place at Manistee, Mich., caused by a reduction of two cents per thousand on packing and sawing. A number of French-Canadian families recently went in and commenced work at the reduction.

THE Hamilton *Spectator* says:—The opposition to the cedar block scheme is being gradually dissipated, as the estimated cost of the pavement becomes known. The introduction of block pavement will be particularly welcome to dry goods merchants, who now lose more in a week from dust than they will be required to pay in a year for the pavement.

THE quantity of redwood timber standing in the State of California is estimated at 25,550,000,000 feet, of which 4,500,000,000 feet are in the county of Humboldt, in which the cut is set down at 600,000 feet per day. The export of redwood from California in the year ending May 21, 1880, was 186,735,000 feet, which since then has been largely increased.

THE Muskegon, Mich., Booming Company decided to be gin operations on April 21. The rates of rafting, towing, and delivering logs to the different divisions, for the season, have been fixed as follows: Division No. 1, 44 cents; division No. 2, 50 cents; division No. 3, 56 cents; division No. 4, 63 cents, a reduction of 5 cents on divisions 1 and 2, and 6 cents on divisions 3 and 4, as compared with last season's schedule.

THE four States producing the most lumber according to the census are Michigan, 4,172,572,000 feet; Pennsylvania, 1,733,844,000; Wisconsin, 1,542,921,000; New York, 1,184,220,000. The production of the first two States has materially increased sinse the census figures were compiled. Wisconsin is now entitled to the second position in the list. No other State outside of the four named produces 1,000,000,000 feet yearly, though Ohio and Indiana hug it closely

SAWDUST, as an ingredient of mortar for house plastering, is commanding considerable attention in certain directions. It is used in place of sand. It is claimed that such mortar is more porous than the ordinary kind, consequently the face of a wall composed of it is warmer; that it is a non-conductor of sound and dampness; that it overcomes the echo in churches and halls. In the manufacture of the mortar a glutinous substance is used which sticks it firmly to the wall.

A CANAL boatman's association has been formed on the Erie Canal, with clearing houses at Buffalo, Tonawanda and New York. The lumber dealers of Tonawanda and Buffalo have taken up arms against the combination, asserting that they will not be controlled by its fixed charges and other arbitary restrictions. On the other hand, the engineers of the new arrangement claim that it will benefit the forwarders of lumber and grain by ensuring the greater despatch and less expense to shippers. It will, at the same time, protect boatmen from the alleged imposition of scalpers. The shippers threaten to discriminate in favor of non-association boatmen, and altogether, according to the Tonawanda *Herald*, the termination of the disagreement is exceedingly doubtful.—*Northwestern Lumberman.*

LUMBER TRADE OF THE OTTAWA VALLEY.

OTTAWA, April 11.—Seizing a few moments of leisure, your correspondent inspected the extensions which have lately been made on the line of the Canada Atlantic Railway at the Capital. Up to last fall the line had only been completed to the northern terminus of Elgin street, some two miles distant from the extensive lumber yards of the Chaudiere. The work of reaching that point has been one of considerable expense, including rock excavations and heavy fillings or gradings, but in the month of December last this work was successfully completed, and the track laid to within a short distance of the lumber mills, where they have now a number of sidings laid to accommodate the loading of several trains of cars simultaneously. Your correspondent visited the new terminus at Chaudiere, where a scene of great activity presented itself; an endless number of cars being loaded with lumber ready for shipment. At this point the company have secured a large area of ground, which, when the sidings are all down, will give facilities for shipping the lumber with unprecedented rapidity, ordinary cars being loaded in an average of not more than half an hour's time. A walk through the yard of one of the prominent lumbermen of the city suffices to show that all the facilities which had been furnished by the company for shipment of lumber were none too ample, and in conversation with the manager your correspondent was informed that the Canada Atlantic railway was a great boon to the lumber trade, and that never before had they been given such facilities for the shipment of their product; heretofore great difficulty had been experienced in obtaining cars, whereas now a simple call to the head office of the company would secure an immediate supply. Enough was seen by your correspondent to convince him at any rate that a new era in the lumber trade of the Ottawa Valley had dawned, and that with the facilities now offered for its rapid shipment the year round—instead of lumber firms, as formerly, having to avail themselves of the limited period of navigation in order to ship their products, and the lumber being thus taken in advance to the market, as it were, to be stored at the points of distribution, and which had serious effect on the price obtained for it—the fluctuations and depression in the great lumber interest which was felt a few years ago is not likely to occur again, in so great a degree at any rate, so far as the Ottawa Valley is concerned. Upon making inquiry as to the quantity of lumber shipped by the road, the record of the past month was given, which showed that an average of twenty-five carloads of twelve net tons each were shipped each day, or 150 carloads per week, and, in fact, recently 175 carloads were shipped within five days, or an average of 35 per day. As no foreign cars are allowed to leave empty, favorable rates of freight can be afforded.—*Ottawa correspondence of the Montreal Gazette.*

THE REAFFORESTATION OF IRELAND.

Among the many schemes that have been put forward for the restoration of prosperity to Ireland, not the least worth of notice is that to which Dr. Lyons, junior member for the city of Dublin, has devoted much of his time and thought and even of his means. Ireland, like other countries has suffered to a serious extent from the wholesale destruction of its forests, and Dr. Lyons thinks that, if money and skill were expended on the replanting of its bare hillsides and moors, the result would be to add manifold to its facilities for supporting a prosperous and happy population. So thoroughly convinced was he that reafforestation would be a real gain for his country that, at his own expense, he invited Mr. Howitz, the forest conservator of Denmark, to examine its resources and needs in this respect. The result, even when allowance is made for the enthusiasm of Mr. Howitz and his employer, is not disappointing. Ireland, in Mr. Howitz's opinion, presents especial conditions for rendering forestry easy and beneficial. Out of its twenty million acres he thinks that five millions, now mostly waste, might be planted with profit. On the continent advantage has been taken of natural conditions far less favorable than those that are found on the mountains and valleys of Ireland, which are adapted for the growth of the better classes of timber. A list of which he appends to his report comprises thirty-six conifers, thirty-eight deciduous and hardwood trees and eight kinds of bushes that could be advantageously grown. His plan would be to plant one hundred thousand acres annually for the next thirty years, which is the time he assigns for a plantation to come to maturity. The varieties he would select according to the readiest local uses of the wood, or, if a demand arose in England or elsewhere, the choice might be modified so as to meet it.

The benefit arising from such a scheme would not, however, be limited by the market value of the timber, but would be felt in many other ways. It is well known that, where trees are absent, the soil becomes poor and the climate deteriorates. Injurious floods both in Europe and on this continent are frequent consequences of forest destruction; and, on the other hand, the fertilizing effects of timely streams are denied to the thirsty soil. For trees not only absorb superfluous moisture but also keep it in store for seasons of scarcity. In Ireland, as elsewhere, this two-fold boon of preservation and refreshing is lacking where the trees have been sacrificed.

One good feature of Mr. Howitz's scheme is that it robs the people of no land that is fit for habitation or susceptible of agriculture. The five millions which he would improve by forest planting consist for the most part of land that pays not a farthing of rent. The question chiefly to be considered is that of ways and means. Judging from the policy of his own government, he took it for granted that the necessary funds would be forthcoming as a matter of course. But the only source from which, at the present moment, any public aid might be expected—the Tramways fund—has already so many claims on its good offices that there is not likely to be a great deal remaining for a purpose not originally included in its provisions. It will chiefly depend on the patriotic spirit of the landlords, therefore, whether his recommendations will be carried out to any really profitable extent.

Happily, on this point, there is some precedent by which the action of some of them, at least, may be assumed. Lord Powerscourt, in a letter to the *Times*, early last summer, gave the results of his own experience of tree planting on his estates in the County Wicklow. This nobleman expresses himself as, on the whole, fairly satisfied with the undertaking. The largest of his plantations comprises about 700 acres of upland, which he covered not only with larch, spruce and Scotch fir, but with oak, willow, poplar, ash and alder. Values, he says, may be effected by many causes, but "if anything like the present rate of growth is maintained for the next twenty years, £50 per acre will be a low estimate." As to cost, he says that in Scotland it can be done for 20s. to 30s. an acre, and except for the rank growth of the grass, it would be no greater in Ireland. If other proprietors are only encouraged to follow the example of Lord Powerscourt, and Dr. Lyon succeeds in imparting to land-owners generally some of his own enthusiasm, considerable benefit may follow the publication of Mr. Howitz's report.—*Montreal Gazette.*

THE GREAT FORESTRY EXHIBITION.

The New Brunswick papers have of late been paying a good deal of attention to the approaching great forestry exhibition at Edinburgh. Mr. Edward Jack has been appointed to represent both the Local Government and the New Brunswick Land and Lumber Company on the occasion. He will be assisted by Mr. Ira Cornwall, jr., for some years resident in St. John, and more recently in Liverpool; who will be remembered by many people in Hamilton and elsewhere in Ontario. The amount voted for Mr. Jack's expenses is more than he will require for himself alone, and an effort is now being made among business men to raise, by private subscription, enough for such expenses as may be incurred by Mr. Cornwall. According to the official programme the articles exhibited are to include, not only timber and lumber in the rough, and tools used in forestry work, but also

all manufactures of wood that may be offered. This allows the showing of a very great variety of articles in general use, and the exhibition bids fair to be one of the largest and most important of the time. The following may be named :—

Implements and tools used in forestry ; models huts, sheds, etc. Plans of river embankments, etc. Saw mills and wood-working machinery of every kind. Fencing material. Timber specimens and ornamental woods. Woods used for railway purposes. Wood pavements. Cooperage. Wood carving and turning, with tools used. Basket and wicker work. Fancy wood work. Wood engraving. Bamboos, reeds, etc. Tanning substances. Material for paper manufacture. Drugs, foods, etc. Charcoal, tinder, etc. Rustic work. Specimens of dried foliage. Illustrations in the shape of drawings, paintings and photographs.

The St. John *Sun* thus lengthens out the list :

"Chief among the list that can be manufactured here with profit are packing boxes of all sizes, our woods being really better suited for this work than any to be found on the continent. Salt and fish boxes are also required in endless quantity. Window sashes, casings, doors and door casings of the better class of woods can be sent to England at a good profit, though it is doubtful if it would pay to compete with the United States in slop work of the cheaper woods. Laundry and kitchen tables and patent folding tables are in demand ; also cloth boards, pastry boards, rolling pins, potato mashers, wooden bowls of all kinds, clothes horses, wringers, towel rollers, ice cream freezers knife and fork boards and boxes, wash boards, (a very large item), pails, tubs, churns, and handles for brooms, mops, hoes, rakes, hammers, hatchets and edge tools generally. There is a large demand for common wood bedsteads, much of which is now received from Boston ; while chairs and furniture in parts, hat and clothes wall racks, stepladders, folding and patent ladders, bench screws and bobbins and spools are standard articles in unlimited quantities. There is a limited demand for shoe pegs, toy or miniature washtubs, pails, chamber sets, wagons, wheelbarrows, log cabbins, bureaus, sand mills and fancy boxes.

Special attention must be paid to the manufacture of spools and bobbins. In the first place, the very best seasoned woods must be used, and the articles made to an exact gauge. As silk, etc., is reeled, not measured, the necessity for accuracy in the size of the spool is obvious. There is a tremendous demand in England just now for Venetian blinds, while ships' furniture presents another line in which very much can be done. Coopers' work—keg and barrel staves, headings, bungs and hoops—also open up a good field. The difficulty with the bungs sent abroad in the past was that they were neither of the right size or style to suit that market. Boot and shoe lasts and boot trees can also be exported with profit ; likewise boxes for trunks, seamen's chests, etc.

The *Telegraph* says :—

The exhibition is intended to include everything connected with or illustrative of the forest products of the world, and will be open to exhibitors from all countries. Exhibitors will be provided with water, gas or steam power, on special terms, and under their own entire control. The shafting, pulleys, belting, etc., will be at the expense of exhibitors. This will enable any person having special wood-working machinery to exhibit it in motion. Exhibitors may mark the selling price of the articles shown, which makes the exhibition something like a great sample house.

Mr. Cornwall, some of whose letters on the subject are published in the St. John papers, suggests that the Edinburgh Exhibition should be further utilized as an opportunity for circulating information about New Brunswick, and promoting the emigration of desirable settlers. The St. John *Globe* is of opinion that, while it is the duty of the local Governments respectively to get vacant lands settled, the Dominion Government is, after all, the authority upon which the duty primarily rests. To which we may add that the important work of immigration and settlement may well engage the best attention of both authorities.

The Dominion Government has declined to take any action in the matter of this exhibition. As the provinces have the control of timber and public lands, the present occasion appears to be clearly one of provincial rather than Dominion responsibility. All the more reason, therefore, why the provinces should be wide-awake and take timely action, each one for himself. So far we have heard of nothing done by the Ontario Local Legislature in the matter, which is surely to be regretted. Ontario has a large interest in the produce of the forest and in manufactures of wood, and it can scarcely be that she is not to be represented at Edinburgh at all. The provincial treasury is flourishing enough to spare very easily a few thousands for the important object indicated. We should be glad to hear that Mr. Mowat and his colleagues had decided to take action at once.—*Canadian Manufacturer.*

HOW TO PREVENT FIRES.

The following simple precautions suggested by the New York *Independent*, if strictly followed, would prevent a great many destructive fires. The rules might be posted in every store, dwelling, and factory with good results :

The leading causes of fires are kerosene oil, matches, and furnaces.

1. Always buy the best quality of oil.
2. Never make a sudden motion with a lamp, either in lifting it or setting it down.
3. Never place a lamp on the edge of a table or mantle.
4. Never fill a lamp after dark, even if you should have to go without a light.
5. See that the lamp wicks are always clean and that they work freely in the tube.
6. Never blow out a lamp from the top.
7. Never take a light to a closet where there are clothes. If necessary to go to the closet, place the light at a distance.
8. Use candles just as much as possible in going about the house and in bedrooms. They are cheaper, can't explode, and for very many purposes are just as good as lamps.
9. Matches should always be kept in earthen jars, or in tin.
10. They should not be left so rats or mice can get hold of them. There is nothing more to the taste of a rat than phosphorus. They will eat it if they can get at it. A bunch of matches is almost certain to be set fire if a rat gets at it.
11. Have good safes in every place where matches are used, and never let a match be left on the floor.
12. Never let a match go out of your hand after lighting it until you are sure the fire is out, and then it is better to put it in a stove or earthen dish.
13. It is far better to use the safety matches, which can only be lighted upon the box which contains them.
14. Have your furnaces examined carefully in the fall, and at least once during the winter by a competent person. All of the pipes and flues should be carefully looked to.
15. If there are any closets in the house near chimneys or flues, which there ought not to be, put nothing of a combustible nature into them.
16. Never leave any wood near a furnace, range, or stove to dry.
17. Have your stove looked to frequrntly, to see that there are no holes for coal to drop out.
18. Never put any hot ashes or coal in a wooden receptacle.
19. Be sure that there are no curtains or shades that can be blown into a gaslight.
20. Never examine a gas meter after dark.

Fires, of course arise from other causes than those we have stated. Smokers burn up much valuable property which is not in the shape of cigars. Bunches of oiled rags of the most inanimate nature in themselves still perform the most wonderful feats in the destruction of property. Tramps, with their old pipes, will creep into barns and haymows, and servants will be careless in thousands of ways, but if every person who owns property will give the subject attention, and see that those around him are posted, and see that reasonable rules are always obeyed, many thousands of dollars could be saved annually which are now burned out of existence.

BOARD OF TRADE RETURNS.

The following are the returns issued by the Board of Trade, for the month of March 1884, and first three months of the year :

MONTH ENDED 31ST MAR., 1884.

Timber (Hewn).	*Quantity. Loads.*	*Value. £.*
Russia	2,045	4,591
Sweden and Norway	85,519	126,823
Germany	14,605	39,176
United States	14,891	55,268
British India	9,867	146,366
British North America	382	1,029
Other Countries	35,065	37,738
Total	162,374	410,991
Timber (Sawn or Split, Planed or Dressed).		
Russia	1,349	1,982
Sweden and Norway	72,960	167,786
British North America	7,997	17,428
Other Countries	34,716	109,850
Total	117,012	297,046
Staves, (all sizes)	7,385	33,290
Mahogany (tons)	6,916	64,875
Total of Hewn and Sawn	279,386	708,037

THREE MONTHS ENDED 31ST MAR., 1884.

Timber (Hewn).		
Russia	5,021	15,690
Sweden and Norway	122,871	183,755
Germany	22,564	62,101
United States	25,747	106,582
British India	20,681	302,110
British North America	6,413	28,988
Other Countries	117,720	130,746
Total	321,017	829,924
Timber (Sawn or Split, Planed or Dressed).		
Russia	12,803	25,180
Sweden and Norway	117,923	270,348
British North America	20,541	46,740
Other Countries	67,034	216,333
Total	218,306	558,601
Staves (all sizes)	17,565	87,382
Mahogany (tons)	18,523	169,681
Total of Hewn and Sawn	539,323	1,388,525

TEe National Manufacturing Company.

The National Manufacturing Company of Ottawa, the enterprising makers of all classes of tents, camp furniture, and flags, are now busy filling an order for New South Wales, Australia, one of their foreign markets. They have carried off every gold and silver medal given for these lines of goods at the Dominion and industrial exhibitions wherever exhibited. And to dispell any doubts from the minds of readers as to the company's claim to the many awards of merit they mention, we quote part of a letter from J. H. Hill, Manager and Secretary of the Toronto Industrial Exhibition Association. He says :—"I beg to say that the highest awards made at the Industrial Exhibitions for the years 1881, 1882, and 1883, for tents, marquees and flags, were to the National Manufacturing Company, being a silver medal for each year. Last year, 1883, was the first in which a medal was specially offered for camp furniture and equipages, and it was awarded to the National Manufacturing Company."

The brilliant show of medals and awards held by them attests the reliability of their goods, and besides their large sales from Prince Edward Island to British Columbia, they ship extensively to the United States, Great Britain and Australia.

THE Ottawa *Free Press* says that there are at present ten thousand pieces of square timber, belonging to the Messrs. Klock of Aylmer, in in Papineau bay. Messrs. Grondin and Racicot, who have the contract of rafting this timber, began work yesterday.

WATER POWER

TO LEASE.

THE UNDERSIGNED having largely extended their raceway at Lakefield, are desirous of corresponding with parties who wish to go into manufacturing, and they are prepared to sell or lease water power on the most favorable terms, or would erect buildings of any size suitable for factories.

R. & G. STRICKLAND

1d86 LAKEFIELD, ONT. w1519

Canada Pine Limits

FOR SALE.

A HALF INTEREST in three of the best

White Pine Timber Limits

en bloc, in the PROVINCE OF QUEBEC, near to Market, and estimated to contain

75,000,000 FEET

White Pine, principally large and of superior quality, is offered for sale to a responsible party who will be expected to assist in working the property, from which large profits can now be made. Price for the half interest $35,000, one-third cash and the remainder in one and two years with interest at seven per cent.

Principals only will address for particulars,

Box 2031, Montreal, Canada.

229

FOR SALE.

SAW MILL, STOCK and Limits,

Situated at Tobermory, Co. Bruce

Stock on hand, Three Hundred and Fifty Thousand Feet Dry Lumber, Eight Hundred Thousand Pine and Cedar Shingles, Four Hundred Cords Wood, Ten Thousand Five Hundred Pieces Paving, Two Thousand Ties, Four Hundred and Forty-five Thousand Feet Pine in the Log, Cedar Timber for 750,000 Shingles. Saw Mill Capacity 20,000 feet per day. Docks, Buildings, Horses. Waggons, Sleighs, Supplies, &c., Eighteen Hundred Acres Land, timbered with Pine, Oak, Cedar, Black Birch, Basswood and Maple, enough to run the Mill ten years. Everything in first-class order and new. The whole amounts to $16,500, figured at cost.

The Property will be sold at a Bargain. For further particulars apply to

MAITLAND & RIXON, Owen Sound,

6l6 Or S. C. KANADY & CO., Toronto.

WANTED AGENTS to sell TUNISON'S

NEW AND SUPERIOR

CANADA MAPS & CHARTS

As paying as any agency in the world. For particulars, full and free, address H. G. TUNISON, 388 Richmond St. LONDON, ONT.

NOTICE.

SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Indian Supplies," will be received at this office up to noon of THURSDAY, 1st MAY, 1884, for the delivery of the usual Indian Supplies, duty paid, in Manitoba and the North-West Territories, consisting of Flour, Bacon, Groceries, Ammunition, Twine, Oxen, Cows, Bulls, Agricultural Implements, Tools, &c.

Forms of Tender and full particulars relative to the Supplies can be had by applying to the undersigned, or to the Commissioner of Indian Affairs at Regina, or to the Indian Office Winnipeg.

Parties may tender for each description of goods separately or for all the goods called for in the Schedules.

Each tender must be accompanied by an accepted Cheque of a Canadian Bank, for at least five per cent. of the amount of the tenders for Manitoba, and ten per cent. of the amount of the tenders for the North-West Territories, which will be forfeited if the party tendering declines to enter into a contract when called upon to do so, or if he fails to complete the work contracted for. If the tender be not accepted the cheque will be returned.

Tenderers are required to make up and attach to their tender the total money value of the goods they offer to supply, or their tender will not be entertained.

The Tender for Beef must be a separate tender ; if it includes any other article it will not be considered.

The lowest or any tender not necessarily accepted.

[No newspaper to insert without special authority from this Department through the Queen's Printer.]

L. VANKOUGHNET,
Deputy of the Superintendent General of Indian Affairs.

DEPARTMENT OF INDIAN AFFAIRS,
OTTAWA, 19th March, 1884.

AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest, best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK CO., Portland Maine.

FORESTRY.

At the winter meeting of the Fruit Growers' Association of Ontario, Mr. John Knowlson, of Lindsay, as follows :—

On the lines of horticulture and agriculture in this Canada of ours, I am impressed with the idea that there are three subjects worthy the special attention of philanthropists and all well-wishers of our country's progress, financially and socially: Forestry, Sorghum, and Grape Culture. Numerous have been the pleadings in our agricultural and horticultural journals for forest tree planting; yet how little has hitherto been accomplished. However, let us still hope that farmers and others will be aroused to its necessity. No people have more reason than we Canadians to value and admire the "goodliness of trees;" and yet in no country are they more rudely assailed as the enemies of civilization, and objects of extermination, by the ruthless axe and consuming fire. Such semi-barbarism is discreditable to our national taste, our common sense, and our foresight in other matters of less moment.

Even to confine our view to the environs of our country towns, with very few exceptions, one of the most forbidding and desolate features about them is the mark of this yearly devastation of forest trees, for which there is no necessity. Whereas, if properly ornamented with trees—some standing alone, some in groups—would be exceedingly attractive; and a park with convenient drives and by walks for pedestrians, would be likely to draw summer residents, whose money would contribute to the permanent enrichment of its community.

An essential part of the proper treatment of all wood lots is *thinning*. Farmers who cut all the wood from a lot, regardless of size or quality whether for use or for sale, are managing as ill as can be imagined. They might thin in such a way as to get a large yearly profit, and get more for the remaining wood than for all they now cut off at once.

Although, as I have remarked, so little has been done in the way of planting forest trees, let us hope that, through the continued labors of the Ontario Fruit Growers' Association, and the influence of the public press, that the day is not far distant when forest culture will become popular.

The boundless area of suitable lands in this country, the admirable adaptation of its soil and climate to the growth of magnificent trees, I trust, will lead to the diffusion of capital and labour in this department, and that it may soon become a favorite pursuit. In no other way can farmers so cheaply embellish their farms and add to their attractiveness and value, as by improving their woods groves and forests, and planting all the choice varieties of native trees on any spare ground not needed for cultivation. So numerous are the varieties of our deciduous trees that we can have but little difficulty in making a selection. There is the elm, the red and white oak, the maple, the black walnut, the ash, the hickory, the black and white birch, the linden (basswood), the butternut, chestnut, larch, etc. And to give greater beauty to these plantations, should be interspersed here and there irregular groups of different varieties, including an occasional evergreen, of which we have many indigenous species; the white and red pine, the spruce, white and red cedar, and what is justly termed the king of evergreens the graceful hemlock.

In the painting of groups it is well first to study the outlines of all the best natural groups to be found, taking careful notice of the way in which the varieties are combined how near the trees are to each other; how often nature has planted them close together; how often within a few feet of each other; how often at the distance of twenty or thirty feet. Although a group thus imitated would not show much beauty in its incipiency, yet it will become more beautiful and picturesque, more and more like nature every succeeding year, and will give delight to everyone who can appreciate nature herself.

However liberally we may introduce foreign trees let us retain a large number of our own. The many uses to which trees contribute prove their great value; for buildings, for fences, for various agricultural implements, for carriages, for ship and boat building, for furniture, for staves, for casks, for fuel, and a thousand other uses for which they are invaluable. Besides, without trees, the world would become a desert; with them it might be made a paradise. They temper the heat and cold, prevent the injurious dryness of the atmosphere, and greatly promote the fall of genial showers and seasonable rains in spring, summer and autumn. In almost every county of Ontario it is easy to find lands covered with wood of a second growth, which, within the memory of the present generation, have been cultivated for farm crops, till they were worn out—that is, so drained of those constituents which plants derive from the earth that no other crop could be got from them that would pay the cost of cultivation. These lands, upon being abandoned by man, soon began to grow up in wood; and in ten or twelve years the fields were covered; and in forty a fair yield of wood got from them. The wood again being cut and the land ploughed and cultivated, good crops can again be had from them for some years. Air and water were the principal fertilizers that sustained their growth, but their leaves shed from year to year had fertilized the soil very much. It occurs to me that very few of those who are desirous to plant out forest trees need be put to the necessity of raising them from seed, for in every section of Canada tracts are to be found where young trees of all sizes, suitable for transplanting are to be had for the labor of digging; and it should be borne in mind that in digging up trees some skill is required. Some have long tap roots that penetrate the ground deeply, while others spread widely near the surface. These different characters require different modes of proceeding; the roots should be taken out of the ground without the slightest bruise or mutilation, if possible, thus the necessity of curtailing the tops would be obviated. The less the roots are exposed to the air between the time they are taken out of the ground and the time they are planted the better. This should never be forgotten. If roots are of any value it can only be when they are sound and fresh. In less than fifty years hence the requiem of the stately pine, the oak, and the elm will have been sung; but their stateliness and their value will be recorded as a thing of the past; do we not already regret the wholesale recklessness which has been employed for their destruction by the grasping hands of avarice.

This scarcity in the older settlements is now felt as a severe loss; but the next generation will in all probability have to deplore their absence as a loss of still greater magnitude.

Plantations of a tree called the *Catalpa speciosa* are now being made on an extensive scale in many parts of the United States. It appears to be a native of the Mississippi valley. It appears to be hardy, and is represented as being a rapid grower and remarkably durable. I procured ten of those three years ago, and planted on a dry, gravelly soil, which I am lead to believe was not the sort best adapted to their growth, although they are said to succeed in all descriptions of soil. The stems were about three-fourth of an inch in diameter and six or seven feet in length. From the fine growth they made and the healthy appearance they showed after two years planted, I was induced last spring to plant 100 more, which I did upon less than acre, on soil similar to the first. Every one grew and looked healthy the past fall. I intend planting another hundred or more on the same plot next spring, together with a few of our native forest trees interspersed.

At the winter meeting of the same association, held in the Council Chamber, City Hall, Toronto, on the 31st January, and 1st of February, 1883, the meeting took up three items on the programme, and discussed them together, viz. :—"The best method of awakening a general interest in Practical Forestry," "The best varieties of Forest Trees to plant for ornament and for profit," and "How can we induce farmers to Plant Trees along the Roadside?"

MR. GOTT.—This is a subject that is growing in interest from year to year. I will confine myself to the question, what varieties of forest trees are best for general planting; and the first variety I might mention is maple. I believe that the trees of that variety command the respect of not only Canadians, but of all people among whom they are known. Our Sugar Maple is one of the most beautiful trees that can be produced in any country. It is a tree that has so many uses and so much ornament about it that wherever we see it we have infused into our minds a genuine love for our country. The soft maple is also a very beautiful tree. It grows very symmetrical, is very ornamental where it is cultivated for ornamental purposes, and in every way fills the expectations of the planter. The American Elm is, I think, one of the most graceful trees that we can have planted on our streets, simply on account of its pendulous habit of branching. The basswood is also a very beautiful tree for ornamental planting; and I often think that if would take our basswood tree and our tulip tree, and bestow upon them the same attention that we sometimes do on exotics, they would repay us better for it. The basswood tree is said to be one of the best honey-producing trees in the country. The tulip tree is also a very handsome tree. It is a tree that will reward any amount of care and attention. It grows very symmetrical; the leaf is very large and showy, and in every way the tree is ornamental and beautiful, but more especially so when it shows its beautiful blossoms. The man who sees it once and learns that it is a native tree will certainly be inspired with a deeper love for the country. The nut trees are very valuable, the chestnut, the white walnut and the black walnut. Amongst our evergreens the Canada balsam is one of the finest and most beautiful. It would be almost impossible to import a tree that would surpass it in beauty. Our pines are also very interesting. We have several of them in our country. If they are taken early and planted in our lanes, they soon assume fine proportions, and become very ornamental trees. The black spruce, taken and cared for, I think fully equal, if not superior to the Norway spruce, of Europe. I saw a specimen of this tree on the ground of Mr. Arnold last winter, which struck me at once in a manner which I shall never forget. These are the principal forest trees that I think are interesting to us.

MR. REESOR.—I have a large number of bass woods in my grounds, and I prize them higher than any deciduous trees I have growing, although I have several varieties. The chestnut and the two kinds of walnut the gentleman recommends, will not grow at all in the locality in which I reside (in the centre of Victoria county), although that is one of the best agricultural districts in the Province. I believe a few black walnuts, in sheltered positions, have been brought to maturity; but no chestnuts will grow. I entirely dissent from what Mr. Gott says with regard to the Canada balsam. I think it is the most worthless of all the evergreens the most unsatisfactory, the shortest lived. That has been my experience of it, and I live in a county in which it flourishes naturally. When we come to plant it as an ornamental tree it takes sick and dies just as it has got to such a height that it is beginning to be interesting.

MR. GOTT.—There must be something wrong in the environment.

MR. REESOR.—I am sorry Mr. Gott did not make mention of two trees I admire very much, the white pine and especially the Norway pine. I think the Norway pine is one of the most beautiful that can be planted.

MR. LESLIE.—That Norway pine is what is known as the red pine.

MR. SLIGHT.—The remark that the previous speaker has made about the Canada balsam fully expressed my experience. I have no doubt that in some parts of Canada it succeeds very well, but in the northern country it does not. I have noticed that just as soon as the trees around it have been thinned out by persons desiring to preserve it, and just when it has attained a fine symmetrical growth and a good size, it begins to decay. From what I have gathered as to the easiness of transplanting and the success which attends it in growing, I have come to the conclusion, that the best native evergreen we have is the white spruce. It is a perfectly healthy tree. I have never yet known a white spruce to show any signs of decay from age, where it has had anything like fair play. Its wood is one of our most valuable timbers for certain classes of work; in boat building especially it is invaluable. From what I know of it I would recommend it as the best tree to plant by roadsides. A timber which I see the architects are seeking after very much is the butternut; and in the northern part of the country the tree succeeds very well.

THE PRESIDENT.—Mr. Gott mentioned the butternut under the name of the white walnut

MR. ARNOLD.—I have to endorse the sentiment of this gentleman with regard to our Canadian Balsam. It is a beautiful tree in its native swamp, and if we could transplant it into a native swamp again, or to some place where it would have a spring about it to keep it moist, it would stand; but if we attempt to transplant it to high ground, just as soon as it gets to be about ten or fifteen feet high, just when it begins to become beautiful, it begins to die. I hope we shall not get the black spruce and white spruce mixed. I find that there is a great deal of confusion in regard to those two spruces. I have them both, but really I do not know which is the black and which is the white. The spruce that Mr. Gott alluded to as growing upon my place I believe to be the black spruce, but I am not positive. The black spruce, if that is what I have, spreads out more at the bottom than the white, and I would consider that it has a blue shade to it. It is one of the prettiest trees we have, either native or foreign. I have challenged the whole county, and I might almost go further and challenge the whole province, to produce as fine a tree as my black spruce, that I got out of a swamp. The Magnolia is perfectly hardy, and the old Austrian pine is one of the finest trees in the country. I feel like planting walnuts all over my place, and I think if I had a hundred acre farm I would plant them in every fence corner—not for their beauty, but because they would pay. The basswood succeeds well in our section. The walnut does well throughout the greater part of the country.

MR. ROY.—I can confirm what Mr. Arnold says about the white spruce, and the Austrian, and the Norway spruce. I have both Norway and black spruce upon my place, and when they have room to grow and begin to grow from the ground, I find that the black spruce is the more ornamental of the two. One fault that the Norway spruce has, is, that it goes away up too high and then gets bare at the top; but the black spruce always remains a beautiful tree, and, as Mr. Arnold says, has a blue tinge. The Austrian pine is one of the most beautiful of trees until it gets old. As to the balsam, I find what Mr. Arnold speaks of; after you have had it removed three or four years you will find a branch here and there through the tree dead; but when it is young it is a very beautiful tree. I think every farmer ought to plant the black walnut and the white walnut. The black walnut is not only a very beautiful tree, but it is going to be a very valuable tree. I do not know but what you will get from $80.00 to $100.00 a thousand feet for black walnut now. Our country is being denuded of it. The ash is also a valuable tree; it is now brought greatly into use in making railway cars and various other things.

MR. ARNOLD.—Americans have come over from Michigan and paid as high as $6.00 to $8.00 a stump for old walnut stumps along the Grand River; and they have taken them over to Michigan and made them into furniture, which they have brought back to us and sent to Europe.

MR. ROY.—I planted about fifteen or eighteen walnut trees some nine or ten years ago—the nuts; and before I came away I went out to get the size of them, and they measured eight or 10 inches in diameter.

A MEMBER.—What is the difference in the growth of black spruce and the Norway spruce, the same time planted?

MR. ROY.—I suppose they will remain at about the same altitude until they get to be about twelve or fifteen years old, and then the Norway spruce will begin to grow past the other.

MR. A. M. SMITH.—There is one tree of considerable importance in our section that has not been mentioned yet, that is, the common poplar. Our pulp mills in the vicinity of St

Catherines are paying from $7.00 to $8.00 a cord for this wood for the purpose of manufacturing pulp for paper out of it, and it is a tree that I think will grow in any part of the province, and very rapidly too. I think our common white cedar has not been mentioned either. For a shelter belt or ornamental hedge even, it is not surpassed by any of our native trees. My experience in regard to balsam is very similar to that of the others who have spoken of it. It is a good deal like some of the human species; it is very promising when young, but as it grows up it sometimes goes to the bad for want of water.

MR. BUCKE.—I think the best way we can interest the farmers in practical forestry is by showing them that there is money in it. There appears to be a general opinion abroad that the black walnut will not grow except in certain favored regions; but anybody who has read Mr. Joly's very able paper on forestry, will see that he is very successful in growing it below Quebec; and if it will grow below Quebec, it will certainly grow in any part of Ontario.

MR. WRIGHT.—Mr. Joly's residence is between Montreal and Quebec, at Lotbiniere.

MR. BUCKE.—Well, below Montreal at any rate; and if they grow below Montreal they ought to grow in any place in Ontario. Owing to the scarcity of the black walnut, the butternut is now being used for it, stained and varnished, and it looks so much like black walnut when it is made up that you can hardly tell the difference.

MR. ROY.—Have you seen the black walnut growing in Ottawa?

MR. BUCKE.—I have specimens growing at my place that are three years old. The tulip is a very handsome tree. The Georgetown mills on the Grand Trunk use half basswood and half rags for pulp for paper. I am told the basswood is running short; it is a very free-growing tree and can be easily cultivated, and where paper works are established I am sure it would pay the farmers to go in and cultivate it, especially on any broken ground they may happen to have; it is worth about $4.00 or $5.00 a cord at paper works. The main difficulty in the way of planting trees along the roadside, is the unfortunate fashion they have here of allowing cattle to run at large. I do not see how you can very well protect trees along the roadside as long as cattle run at large. There ought to be some act of the legislature, if there is not one at present, to restrain cattle.

(*To be Continued.*)

GREAT EXHIBITION OF TEXTILE FABRICS AND MACHINERY.

On August 4th of the present year there is to be opened in the Agricultural Hall, London, an exhibition that will include everything connected with the production and manufacture of all kinds of textile fabrics, whether used as clothing or furniture, will comprise every novelty in machinery, tools, and appliances used in the textile trades, and also manufactured goods, both in the piece and made up for use or wear. All the processes incidental to spinning, weaving, etc., will be shown in operation, from the raw material to the finished manufactured article. Emmott & Co., of the Textile Manufacturer, Manchester, England, have been associated officially with the management and as the exhibition will be devoted entirely to textile fabrics and the machinery on which they are made, the selection of those gentlemen is certainly a good one. The exhibition will open August 4, and close September 20, 1884.

The Duty on Lumber.

Many Americans want the duty to be thrown off Canadian lumber going there. Ex-Governor English of Connecticut who is reported to be worth $5,000,000 has been largely interested in the lumber business for many years. He was asked if he favored the placing of lumber on the free list. "Most assuredly I do," was his reply. "Maine is stripped of all but her coarse lumber, and New York state is denuded of its hardwood supply. Michigan is the only state from which we can obtain a supply of building woods. The South has the woods, to be sure. In Arkansas, notably, there is a great supply, but it costs more to get it up here than it would to get it from Canada. Our policy of protecting in this instance has worked to the destruction of our great forests. The country suffers materially in consequence. Unless lumber is put on the free list what few woods we have left will be sacrificed, and then we shall be at the mercy of the Canadians. It is but the part of wisdom to put lumber on the free list."—*Ottawa Free Press.*

Dwarf Trees.

The dwarf trees of China are curiosities of forestry. Every child knows how the Chinese cramp their women's feet by bandaging them when they are infants, and thus render it impossible for them to walk. It is, however, wonderful to see minature oaks, chestnuts, pines and cedars growing in flower pots, 50 years old and yet not a foot high. To do this take a young plant, cut off a tap root, and place it in a basin in which there is good soil kept well watered. If it grows too rapidly, dig down and shorten in several roots. Every year the leaves grow smaller, and the little dwarf trees make interesting pets.

The British Canadian Lumber Company.

The Chancellor gave judgment on Wednesday April 9th upon the petition of Bates to wind up the British Canadian Lumber Company. He held that the company is not insolvent within the meaning of the Winding Up Act, and therefore refused the order. He found it unnecessary to consider the question of the jurisdiction of the Court over a foreign corporation doing business here, coming to the conclusion that he did upon the merits.

AN Ottawa correspondent says that Mr. J. R. Booth, a lumberman of that city, is building a railway between Lake Nippissing and Lake Nosbonsing. The railway will be five miles long, and is to cost about $100,000. It is to be used to carry timber.

THE Middlesex Mechanics' Association, of Lowell, are considering the feasibility of holding a fair the last two weeks in September, and the board of government have been instructed to estimate the expense, obtain other information, and report the advisability of holding a fair, at a future meeting, The corporations of Lowell have offered to contribute $2,800 toward the fair.

THE Muskegon *News* says:—Several of the mill docks have not a single foot of lumber remaining thereon unsold, and the owner thereof have disposed of considerable lumber yet in the log. These are facts which may not be ignored in the consideration of the business outlook, and they serve to inspire lumber manufacturers in this district with confidence as regards the prospective business for the season of 1884. The doubt and uncertainty which clouded the business outlook here during January and February have been succeeded by a more cheerful and buoyant spirit.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain and cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup for children teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentery and diarrhoea, regulates the stomach and bowels, cures wind, colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for children teething is pleasant to the taste, and is the perscription of one of the oldest and best female nurses and physicians in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

A VALUABLE HINT.—Artizans, actors, sportsmen, mechanics and laboring men, in fact all who unduly exert muscular strength, are subject to painful contractions of the cords, stiff joints and lameness; to all such Hagyard's Yellow Oil is a prompt relief and perfect cure.

NAMES, FACTS AND FIGURES—Will be cheerfully given by the proprietors of Burdock Blood Bitters, regarding the many certificates of wonderful cures made by that medicine in chronic diseases of the blood, liver and kidneys, revealing proof that it is beyond the possibility of dispute by the most incredulous.

THE BABY'S PRAYER.

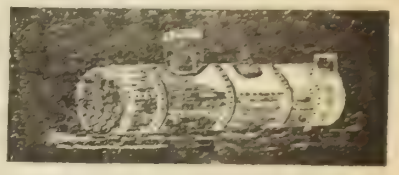
She knelt with her sweet hands folded,
Her fair little head bent low,
While dead vines tapped at the window
And the air was thick with snow.
Without, earth dumb with winter;
Within, hearts dumb with care;
And up through the golden silence
Rose softly the baby's prayer.

"Bless all whom I love, dear Father,
And help me be good," she said;
Then stirred by a sudden fancy,
She lifted the shining head.
Did she catch on the frozen maple
Some hint of the maple green,
Or the breath of the woodland blossoms,
The drifts of the snow between?

"The beautiful trees," she whispered,
"Where the orioles used to sing,
They are tired of the cold, white winter,
Oh, help them to grow in spring;
And the flowers that I love to gather,
Lord, bring them again in May;
The dear little violets, sleeping
Down deep in the ground to-day."

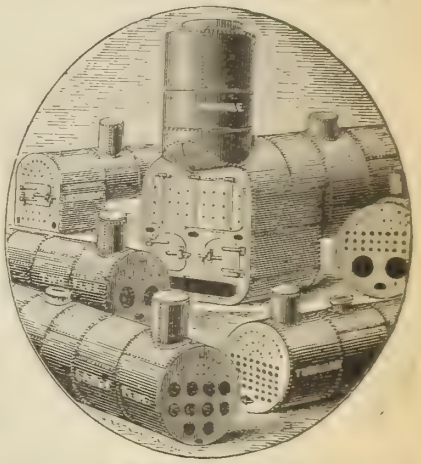
Ah, earth may be chill with snowflakes
And hearts may be cold with care,
But wastes of a frozen silence
Are crossed by the baby's prayer;
And lips that were dumb with sorrow
In jubilant hope may sing,
For when earth is wrapped in winter
In the heart of the Lord 'tis spring.

COLQUHOUN, DRUMMOND & CO.,
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BILIOUSNESS, DIZZINESS,
DYSPEPSIA, DROPSY,
INDIGESTION, FLUTTERING
JAUNDICE, OF THE HEART,
ERYSIPELAS, ACIDITY OF
SALT RHEUM, THE STOMACH,
HEARTBURN, DRYNESS
HEADACHE, OF THE SKIN,
And every species of diseases arising from disordered LIVER, KIDNEYS, STOMACH, BOWELS OR BLOOD.
T. MILBURN & CO., Proprietors, Toronto.

Market Reports.

TORONTO.

From Our Own Correspondent

APRIL 24.—The retail yards continue to do a good thriving trade, more especially those situated at the west end of the city. Dealers at the east end say that they could do with more business and not feel over-taxed. This is generally the case to a greater or less extent; towns as well as empires progress toward the setting sun, and this city is no exception to that rule. Two new wards have lately been added, one at the east end and one at the west, and the municipality of Parkdale, a large western suburb, will be embraced ere long, and that portion of the city which has been considered as the western end will become the centre.

No shipments have been made over our docks as yet, but the dulness has been in some measure relieved by the loading of timber vessels for Collins Bay. This is a new departure from established methods, all timber for the Quebec market having heretofore been rafted and towed down the lake, but by the present means this timber will arrive in Quebec fully one month earlier, as our lake is never safe for towing timber before the first of June.

The timber now loading is a fine lot of rock elm and ash owned chiefly by Burton Bros., of Barrie, and was brought over the G. T. and C. V. railroads. Donkey engines are used on the decks of the vessels for the purpose of loading, the timber being taken into the hold of the vessel through port holes in the stern, so that the process of loading is rapid.

The quantity of sawn lumber coming in by the N. & N. W. R. R. is about 35 cars per day, which is small considering that navigation may be said to be fairly open, so far as this port and that of Oswego is concerned, but at the opening of next month we may fairly assume that lumber will move more freely.

Retail prices remain as quoted you in my last letter, with an active demand for long bill stuff and 1½ in. plank from good dressing to picks, the latter being exceedingly scarce. Laths are in good demand with only a limited supply. Mill cull boards, unless well inspected, are a drug on the market. A low grade of culls that would have sold readily on this market two years ago cannot be sold at any price now, the same remarks apply to cull 2x4 and plank.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
Scantling and joist, up to 16 ft	13 50
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 00
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	20 00
" " " 32 ft	21 00
" " " 34 ft	22 50@22 50
" " " 36 ft	24 00
" " " 38 ft	27 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	24 00
" boards "	20 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 00
Three uppers, Am. inspection	35 00@40 00
B. M.	
1¼-inch flooring, dressed	30 00
1¼ " " rough	16 00
1¼ " " dressed	25 00
1½ " " undressed	15 00@15 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ⅌ M	2 90
Sawn Lath	2 75

MONTREAL.

From Our Own Correspondent.

APRIL 25.—Business for the spring season can hardly be said to have opened up yet, but there is a marked improvement since the date of our last report, and as soon as the canals are opened for navigation prospects are good for the lumber trade. The new lumber basin in the canal is pushed forward and the contractor is going to work both day and night as the contract calls for completion next fall. In the far west lumber business is looking very fair, and after navigation opens in the Lake Superior region a good demand is expected. In Ottawa dimension timber men are waiting anxiously for the spring drive, as nearly all the timber they got out last season is used up, and it will be about the 15th of June before the new seasons cut arrives. The demand for deals in Quebec is very good and prices satisfactory, but the square timber trade is likely to be very flat there this year.

We have no change to make on our price list, but considerable changes are looked for as soon as navigation is fairly open.

Pine, 1st quality, ⅌ M	$35 00@40 00
P ne, 2nd " ⅌ M	22 00@24 00
Pine, shipping culls, ⅌ M	14 00@16 00
Pine, 4th quality deals, ⅌ M	11 00@12 00
Pine, mill culls, ⅌ M	10 00@12 00
Spruce, ⅌ M	10 00@13 00
Hemlock, ⅌ M	9 00@10 00
Ash, run of log culls out, ⅌ M	20 00@25 00
Bass, " " ⅌ M	17 00@20 00
Oak, ⅌ M	40 00@50 00
Walnut ⅌ M	60 00 100 00
Cherry, ⅌ M	60 00@80 00
Butternut, ⅌ M	35 00@40 00
Birch, ⅌ M	20 00@25 00
Hard Maple, ⅌ M	25 00@30 00
Lath, ⅌ M	2 50@ 0 00
Shingles, 1st, ⅌ M	3 00@ 0 00
Shingles, 2nd, ⅌ M	2 50@ 0 00

CORDWOOD.

Dealers who have been in the Cornwall region report a scarcity of dry wood, owing to the small output this season, and as a consequence prices there demanded are high. Stocks here are pretty low and boats are eagerly looked for next week. Prices here are firm at last quoted, viz., ex cartage at the railway station:

Long Maple	$ 7 00
Long Birch	7 00
Long Beech	6 50
Tamarack	5 50

WINNIPEG.

From a late issue of the *Commercial* we take the following:—The report from the lumber trade is one of steady improvement. Sales during the week have been quite heavy, and are expected to continue so from this time forward There is as yet no reliable scale that can be published, and quotations depend in a great measure upon the extent of the order to be filled, and the terms of payment, cash down being certain of bottom prices. The prices at which the city contracts for lumber will doubtless form a rock bottom basis. There is no word of the mills in the city starting up yet, but with the probability of the river opening in a few days, we should have them at work by the beginning of May.

Pine lumber, 1st, common boards, dressed	$26 50
do, 2nd, dressed	25 50
do, 1st dressed rough	26 50
do, 2nd do.	25 50
Sheating, rough	25 00
Timber 16 feet and under	24 00
do. over 16 feet, for each additional 2 feet.	1 00
Dimension and joists 16 feet and under	24 00
do, do, over 16 feet for each	1 00
Fencing	25 00
2 and 3 in. battens	30 00
A. stock boards, all widths	50 00
B. do. do.	45 00
C. do. do.	40 00
D. do. do.	35 00
1st clear, 1, 1¼, 1½, and 2 inch	60 00
2nd do. do. do.	56 00
Window and door casings	50 00
Base boards, dressed	50 00
1st pine flooring, siding and ceiling	40 00
2nd do. do. do.	35 00
3rd do. do. do.	30 00
½ inch split siding, dressed	30 00
Spruce lumber—timber 16 feet and under	22 00
do. over 16 feet for each additional 2 feet	1 00
Dimension and joists, 16 feet and under	23 00
do do. over 16 feet, for each additional 2 feet	1 00
Boards	22 00
1st flooring, siding and ceiling	28 00
XX shingles	5 25
Star A shingles	5 25
X shingles	5 00
A. do.	4 50
Lath	4 50

LATER.

Later despatches tell us that some heavy contracts are at present in the market in lumber, and sales during the month are expected to be quite heavy. There has been considerable of a movement during the week, but the real rush of the season has not yet been entered into. There can be no doubt but that business looks much more promising than it did a year ago, but there is no reason to believe that dealers will get anything like the prices with which 1883 opened, and the fact that a large proportion of the season's sales will be large contracts, will help to hold prices down. Still, the outlook is much healthier than it was a year ago. Prices cannot yet be quoted, and quotations will probably be of a shifting character during the whole summer. The opening of navigation will doubtless bring matters more to a focus, and reliable quotations will then be obtainable.

OTTAWA.

From Our Own Correspondent.

APRIL 25.—Monday next will see all the saw mills in this district in full operation. The date of the commencement is about two weeks earlier than for some years past. A lively season is anticipated, and night and day watches are to be put at work immediately. The demand in the American market at present is very good, but no advance in prices has taken place. The yards hereabouts have been pretty well run down, owing to the extensive quantity shipped by rail during the winter. Sherman, Hurdman & Lords' mill was the first to run this season. It commenced to run on Wednesday of this week. E. B. Eddy's splendid new mill will begin on Monday. Mr. Eddy, a few weeks ago, purchased at auction Skead's Nepean steam saw mill, said to be the best equipped mill in Eastern Ontario. There was a very large attendance at the sale, but bidding way very dull, only a few offers being made. The property was sold by the Merchants Bank. The price paid was $40,000, not half what it was worth. The mill will not be run this season.

Navigation opened a few days ago. A few of the Chaudiere firms are loading their barges. The first tow of the season will leave with three million feet of lumber on Wednesday. This tow belongs to J. R. Booth, who commenced loading the earliest this season. Perley & Pattee are also loading a number of their barges. Freight rates will be about ten per cent. less than last year. From here to Albany the rate per thousand feet will open at $3.25; and to New York $3.50. Canadian freights will also be slightly lower than last year. Messrs. Murphy & Co. have purchased the fleets of Messrs. Perley & Pattee and J. R. Booth. This firm has in all thirty-five barges and five steamers. Boatmen anticipate a brisk season. The Rideau Canal will open on the first of May, and the Grenville Canal will be opened on Monday next, earlier than it has been for the past ten years. The Lachine canal opens on the 4th of May.

The work of preparing the Chaudiere timber slides has about been finished. A raft belonging to McLaughlin Bros., of Arnprior, will be run over in a week or so. This is an unusually early period for timber to be brought over.

The electric light has now been introduced into all the mills here except one—Sherman Hurdman & Lord's. Perley & Pattee and J. R. Booth have adopted the Thompson & Houston light, and each firm has 20 lamps. Young & Gordon and Bronson & Weston have adopted the United States Electric Lighting Co.'s light. The first mentioned firm have ten lamps and the latter 20. E. B. Eddy uses the Brush light and has 40 lamps.

PERSONAL.

General Lord, of Sherman, Hurdman & Lord, returned a few days ago from Bermuda, where he had been recuperating during the past winter. He has recovered considerably.

BOSTON.

Cotton, Wool and Iron of April 19, says:—The general market continues pretty quiet, although improving with the milder and more settled weather. An enlarged and active business is to be reasonably expected shortly.

Orders for spruce lumber are coming in liberally, and the mills are having all they can do. It is claimed that there is quite a possibility of prices going up by and by. White pine shows a little more inquiry, with prices steady. Southern pine is moving in small lots at low and unimproved prices. The market for hardwoods is steadily improving, with prices rather strengthening than othewise on desirable grades. Walnut holds its own, and is in steady demand. The trade for ash improving with prices firmer, and same is true of whitewood. Oak continues to move slowly. Cherry finds a good market forthe better grades.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

CHICAGO.

The *Northwestern Lumberman* of April 19th says:—The port list, as published in the daily press, shows that 72 cargoes of lumber and shingles have arrived here during the past week, but the majority of them have gone directly to the yard docks. Most of the lumber now coming is dry stuff from the cross piles at the mill points on the east side of Lake Michigan, and has been bought over there and shipped by the purchasers, or for them. Thus it cuts no figure with the regular cargo market, but transactions in it do have some influence on prevailing values.

The market season has not yet fairly opened, nor is it likely to till about May 1. It may be surprising to some to learn that there is more lumber arriving now than there was last year at this date, but such is the fact. In April, 1883, during the week ended April 19th, but four or five cargoes had been sold on the market; this week more than that number have changed hands, either directly at the docks or to arrive, while the port list shows a greater activity than last season of shipment directly to the yard docks. Yet there is a reported apathy, both among shippers and purchasers. and certain it is that few of the yard merchants are seen on the docks.

Receipts of lumber, shingles, etc., for th week ending April 7, as reported by the Lumberman's Exchange:—

	RECEIPTS. *Lumber.*	*Shingles.*
1884	24,693,000	7,384,000
1883	2,191,000	371,000

FROM JANUARY 1, 1884, TO APRIL 17, 1884, INCLUSIVE.

	RECEIPTS. *Lumber.*	*Shingles.*
1884	81,064,000	14,991,000
1883	33,346,000	20,749,000
Increase	48,718,000	
Decrease		5,758,000

	STOCK ON HAND APRIL. 1. 1884.	1883.	1882.
Lumber	370,461,916	412,007,038	279,324,096
Shingles	270,041,250	147,063,179	115,263,625
Lath	38,582,546	43,686,338	20,518,306
Pickets	1,169,586	3,497,232	3,802,011
Cedar posts	221,228	113,842	145,335

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ⅌ M	$53 00@58 00
Pine, fourths	53 00@58 00
Pine, selects	53 00@58 00
Pine, good box	22 00@33 00
Pine, 10-in. plank, each	00 42@00 46
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 21
Pine, 10-in. boards, 16 ft., ⅌ M	28 00@32 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	16 00@18 00
Pine, 1-in. siding, select	43 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ⅌ M	40 00@43 00
Ash, second quality, ⅌ M	25 00@30 00
Cherry, good, ⅌ M	60 00@85 00
Cherry, common, ⅌ M	25 00@35 00
Oak, good, ⅌ M	40 00@43 00
Oak, second quality, ⅌ M	20 00@25 00
Basswood, ⅌ M	25 00@30 00
Hickory, ⅌ M	40 00@40 00
Maple, Canada, ⅌ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ⅌ M	38 00@40 00
Shingles, shaved, pine, ⅌ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 4 75
" clear, "	0 00@ 3 25
" cedar, mixed	0 00@ 3 50
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ⅌ M	0 00@ 2 75
Lath, spruce, "	0 00@ 3 00

OSWEGO, N. Y.

From Our Own Correspondent.

No change in prices; trade has improved since our last report. It is the general feeling among dealers that prices on common grades will decline after navigation is fairly open, as the stocks in all directions sum very large. The assortment here is very much broken, but there is a full stock on hand.

Three uppers	$44 00@45 00
Pickings	34 00@35 00
Fine, common	20 00@24 00
Common	13 00@16 00
Culls	10 00@13 00
Mill run lots	14 00@18 00
Sidings, selected, 1 inch	30 00@35 00
1½ inch	30 00@36 00
Mill run, 1x10, 12 inch	17 00@19 00
selected	22 00@26 00
Shippers	13 00@16 00
Strips, 1 and 1½ inch mill run	14 00@18 00
" " " culls	10 00@12 00
1x6 selected for clapboards	22 00@35 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 00@ 3 50
XX pine shingles	2 30@ 2 50
Lath	2 00@ 2 25

BUFFALO.

We quote cargo lots:—

Uppers	$48 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

GLASGOW.

From the *Timber Trades Journal* of April 12 we take the following:—A comparative statement of stocks as at 31st of March, 1882 1883, and 1884, is appended. The consumption during the past quarter of the various descriptions of Quebec log timber specified amounts to about 15,500 loads, showing a slight falling off compared with corresponding period last year. Of Pensacola Pitch pine logs (hewn and sawn) the quarter's consumption has been about 8,600 loads, being an increase of 800 loads over last year. The consumption of Quebec deals (pine and spruce) for the quarter has been 3,660 St. Petersburg standards, and of lower port deals about 1,500 standards. Following are the particulars of the stock of deals on hand at 31st of March last:—

	Pieces.
Quebec 1st yellow pine	39,322
" 2nd "	10,211
" 3rd "	135,821
" 4th "	47,593
" red pine	31,953
" spruce	58,512
Lower port spruce deals	117,565
" pine deals	78,862

For the past week the imports to note have been two cargoes of pitch pine logs and planks, and parcels of walnut, poplar, &c., per steam liners from New York, also a cargo of Mexican mahogany, consigned to Messrs. Wm. Connol & Co.

The first of the timber fleet sailed from Greenock for the St. Lawrence on Friday last. Some vessels have been taken up so low as 21s Quebec to Clyde.

NOTE OF THE LEADING WOOD GOODS ON HAND AT CLYDE PORTS 31ST MARCH, 1882, 1883, AND 1884,

	Loads (50 c. ft.) 1884.	1883.	1882.
Quebec waney boardwood	14,684	9,578	11,844
" yellow pine timber	24,029	9,839	15,981
" red pine	5,533	3,716	5,311
" oak	8,792	5,809	4,330
" elm	1,219	1,691	3,409
" ash	328	241	502
Birch, all sorts	402	17	364
Pensacola pitch pine, hewn	6,203	4,639	9,382
" " sawn	13,309	8,587	10,157
" " planks	1,237	242	1,659
Demerara greenheart	455	207	440
	St. Pet. stds. (165 c. ft.)		
Quebec yellow pine deals	3,819	2,616	2,426
" red "	551	123	191
" spruce deals	788	830	167
Lower port spruce deals	1,822	384	477
" pine "	1,227	350	475

AUCTION SALE.

On 9th inst., at Glasgow Messrs. Singleton, Dunn, & Co., brokers (unreserved)—

Quebec 3rd spruce deals—		Per cub. ft.
13 ft.	9×3	10d.
10/17 "	8×3	9d.
10&11 "	8×3	8¾d.
7/11 "	7/9×3	8¾d.
10/16 "	7×3	8¾d.
Quebec 4th spruce deals—		
12 & 13 ft.	11×3	9d.
12 "	9×3	8½d. & 8¾d.
12 & 13 "	9×3	8½d. & 8½d.
12/14 "	7/9×3	8½d.
St. John, N. B., spruce deals—		
11, 12, 14, 15, & 19 ft.	11×3	9d. to 10½d.
11 "	9×3	8¾d.
Miramichi spruce deals—		
10/22 ft.	7/8×3	8¾d.
Hemlock deals—		
10/20 ft.	7/17×3	9d.
Pictou birch timber—		
14¾ & 15 in. av. square		1s. 6½d

TYNE.

The *Timber Trades Journal* of April 12, says: The arrivals of the past seven days consist mainly of pit-props and mining timber, relieved only by two cargoes prepared floorings, which have come forward to the order of local merchants. In the latter goods there appear to be no stock held at the present time, the local mills being apparently sufficient to manufacture all that is required. In trade generally there is no change to notice. Prices do not vary to any appreciable extent, the demand being moderate. In pitwood the stocks held are very much too large, and prices are miserably low; in the face of all the quantity coming forward no improvement need be looked for. The only chance of a rise would be to allow all the props to remain in Norway and Sweden for another six months.

LONDON.

The *Timber Trades Journal* of April 12, says:—The close approach of the holidays will afford the trade an interval that will not be unwelcome at this crisis, while the inclination of the market is so undecided, while the absence of any sale next week ought to help prices, if they can be moved by anything.

There seems to be a tendecy to speak of prices at the present time as exceptionally low, but this is a great mistake, and we have only to go back half a dozen years or so, and we shall find free-on-board values were 10s. to 20s. lower than they are at present, with freights much higher then than now.

The stocks of staves are full ones for the time of year, though not so large as they were last spring at this date. Baltic are heavier, Quebec and New York, on the contrary, are short, but the market for this kind of timber moves very sluggishly. A conaiderable demand for staves lies outside the regular cooper trade, but with the increasing importation of cabinet and fancy woods, many of these channels of consumption will be closed.

LIVERPOOL.

The *Timber Trades Journal* of April 12, says: The approaching holidays appear to have had some influence in quieting down business during the past week, so far as regards operations in ordinary timber transactions. Freights continue low, and although ship owners are reluctant to accept such offers as are made by charterers, there is apparently a disposition to accept low offers rather than allow available tonnage to lie idle. The deliveries for the past month have been good all round, though there have been exceptions in some articles, notably spruce deals, which have been unusually low.

There must be a restricted import of these goods if current prices are to be advanced, unless freights can be continually be obtained at the rates now quoted. This is a matter which depends upon the course of events, and upon which we cannot comment.

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, April 8, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., N. W., Washington, D. C.:—

296,496.—Hoop-pointing and lapping machine—F. L. Wilson, West Bay City, Mich.

296,591.—Pavement wood—J. Kerr, London, England.

296,562.—Planing-machine.—E. B. Hayes, Big Rapids, Mich.

296,488.—Planing polygonal bodies, machine for—J. Pleukharp, Columbus, Ohio.

296,471.—Saw filing machine, gin—F. M. Sisk, Newnan, Ga.

296,418.—Saw frame, buck—T. Larouche, Watertown, New York.

296,618.—Saw mill, gang—D. C. Prescott, Marinette, Wis.

296,442.—Saw mill set works—R. R. Parsons, Jackson, Miss.

266,360.—Saw shifting machinism for gang-edgers—D. L. Stevens, Lyons, Iowa.

296,334.—Sawing machine, circular—J. H. Jones, Lynchburg, Va.

296,652.—Sawing machine, circular—J. Van Patten, East Tawas, Mich.

296,693—Sawing-machine, scroll—W. J. Hull and W. E. Varney, Alexandria, Dakota, and Daytonville, Iowa.

10,467.—Sawing machines, feed mechanism for circular—(Reissue) J. H. Hermance, Toledo, Ohio, assignor to R. S. & R. L. Greenlee, Chirago, Ill.

296,525.—Shingle-sawing machine—J. & J. W. Challoner, Omro, Wis.

PATENTS ISSUED APRIL 15.

296,873.—Auger handle—D. M. Parry, Rushville, Ind.

LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on April 1st, 1883 and 1884, and also the Consumption for the month of Mar. 1883 and 1884:—

	Stock, April 1st, 1883.	Stock, April 1st, 1884.	Consumption for the month of April, 1883.	Consumption for the month of April, 1884.
Quebec Square Pine	161,000 ft.	384,000 ft.	65,000 ft.	80,000 ft.
" Waney Board	142,000 "	285,000 "		
St. John Pine	18,000 "	32,000 "	11,000 "	1,000 "
Other Ports Pine	42,000 "	69,000 "	4,000 "	8,000 "
Red Pine	41,000 "	48,000 "	14,000 "	2,000 "
Pitch Pine, hewn	545,000 "	280,000 "	64,000 "	139,000 "
" Sawn	450,000 "	680,000 "	62,000 "	184,000 "
Planks	60,000 "	68,000 "	11,000 "	30,000 "
Dantzic, &c., Fir	25,000 "	86,000 "	9,000 "	31,000 "
Sweden and Norway Fir	19,000 "	93,000 "	2,000 "	22,000 "
Oak, Canadian and American	201,000 "	267,000 "	29,000 "	26,000 "
" Planks	168,000 "	164,000 "	37,000 "	75,000 "
" Baltic	21,000 "	13,000 "	4,000 "	9,000 "
Elm	29,000 "	10,000 "	6,000 "	3,000 "
Ash	2,000 "	26,000 "	2,000 "	3,000 "
Birch	69,000 "	50,000 "	21,000 "	30,000 "
East India Teak	40,000 "	55,000 "	26,000 "	15,000 "
Greenheart	132,000 "	82,000 "	4,000 "	27,000 "
N. B. & N. S. Spruce Deals	12,614 stds.	16,247 stds.	3,044 stds.	1,820 stds.
" Pine "	1,145 "	2,150 "		
Quebec Pine & Spruce Deals	6,387 "	7,620 "	892 "	987 "
Baltic Red Deals, &c.	3,687 "	4,272 "	417 "	367 "
Baltic Boards	340 "	60 "	21 "	— "
" prepared Flooring	6,642 "	5,293 "	723 "	1,402 "

J. S. MAYO

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OF EVERY DESCRIPTION.

9 Common Street, Montreal.

AMERICAN LUBRICATING OILS A SPECIALTY.

As I carry the LARGEST and BEST assorted Stock of OILS in the Dominion, I am prepared to fill all orders Promptly and at

LOWEST MARKET PRICES.

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297,010.—Barrel shaping machine—J. M. Robinson, Brooklyn, N. Y.

297,013.—Boring square holes, tool for—M. Rothschild, Shamokin, Pa.

296,925.—Cellulose from wood, etc., manufacturing—C. F. Dahl, Dantzic, Prussia, Germany.

297,070.—Chuck, lathe—G. W. Davis, assignor of one-half to E. H. Noble, New Bedford, Mass.

296,785.—Plane—J. B. Ripsom, Oshkosh, Wis.

296,933.—Plane, bench—N. E. Curtis, Mauston, Wis.

296,999.—Saw mill head block—D. Parkhurst, assignor of one-half to G. H. Knight, St. Louis, Mo.

296,982.—Screw wood—J. B. Low, assignor of three-fourths to G. H. & N. Seeley and J. H. Taylor, New York, N. Y.

296,929.—Stump extractor—A. S. Croxton, deceased, Cedar Springs, Mich., O. A. Croxton administrator.

197,026.—Stump extractor—W. Smith, Tomah, Wis.

296,915.—Stump puller—C. A. Blume, Union City, Ind.

PATENTS ISSED APRIL 22.

297,407.—Gear, driving—F. Jenkin, Edinburgh, Scotland.

297,347.—Lubricator—H. R. A. Boys, Barrie, Ontario, Can.

297,485.—Lumber rack—J. A. Aycock, Whitesburg, Ga.

297,395.—Lumber trimming machine—E. Heyde, East Saginaw, Mich.

297,403.—Moulding machine—J. W. Hudson, Wellington, Ill.

297,231.—Saw, drag—F. A. Crawshaw, Willshire, Ohio.

297,366.—Saw, hand—C. A. Fenner, Mystic River, Conn.

297,125.—Saw handle—P. Fraizer, Mount Summit, Ind.

297,513.—Saw jointer and gauge—H. Flater, Finly, Ohio.

297,243.—Saw tab—J. E. Emerson, Beaver Falls, Pa.

297,242.—Saw tab plate—J. E. Emerson, Beaver Fall, Pa.

297,312.—Shaft bearing—H. Tabor, Watkins, N. Y.

297,153.—Shafting, coupling—A. Muir, Manchester, England.

297,282.—Vice, carpenter's—J. F. Miller, assignor of one-half to W. E. Hague, Pittsburg, Pa.

CREPIN, MURPHY & Co., of Montague, Mich., have sold the entire cut of their mill for this season to the Chicago Lumber Company. The transaction is reported to have involved about $500,000.

AN UNPROTECTED FAMILY—Is one that has not that valuable remedy, Hagyard's Yellow Oil in the house for accidents and emergencies. It cures colds, croup sore throat, deafness, rheumatism, neuralgia, chilblains, burns, bruises and all painful injuries.

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Augusta, Maine.

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STEAM ENGINES, STEAM PUMPS, STEAM BOILERS, SAW MILL MACHINERY,
Of Every Description.

RUBBER BELTING,
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MANUFACTURER OF

KNIGHT'S PATENT "EXCELSIOR"

SAW MILL DOGS

The Sawyer's Favorite

For Holding Logs upon a Saw Mill Carriage while being Sawn into Lumber.

MISSISSIPPI, June 7th, 1883.

HUGH GIBSON, ESQ.,—Your Patent Excelsior Mill Dogs give entire satisfaction, and is certainly up to your recommendation. They are the best Mill Dog in the market. I am very much pleased with them.

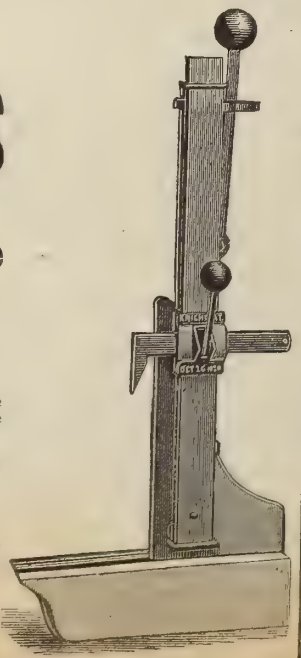
Yours Respectfully,
PETER McLAREN.

BERKLEY, April 20th, 1883.

HUGH GIBSON,—SIR,—The Dogs I bought of you give satisfaction. They beat any Dog that I ever saw for ripping or edging lumber on carriages. They are just the thing for scantling. I would not take $50 for them to-day and have to wait for another pair to come from you, because I believe they make two dollars a day for me.

Yours truly,
GEO. S. BROWN, JR.

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EXCELSIOR DOG.

Manufactured by HUGH GIBSON, CHATHAM.

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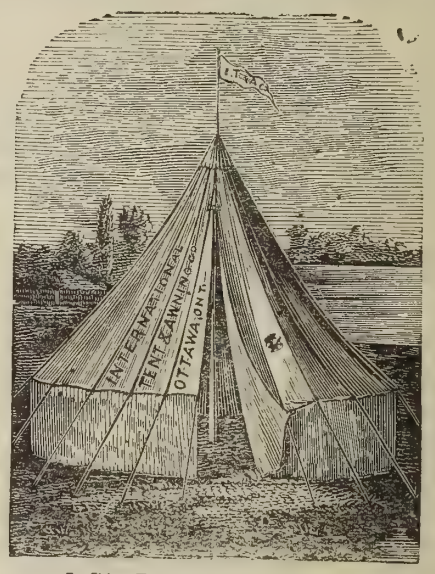
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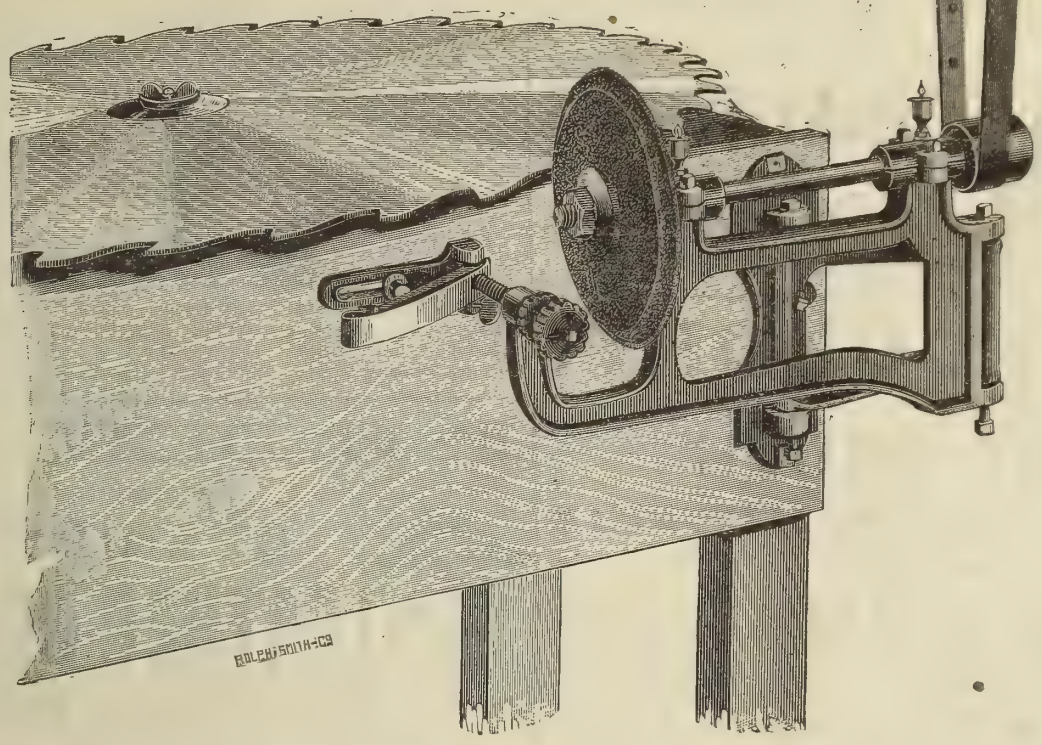
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SAW GUMMER and SHARPENER

The Handiest Machine for these purposes ever Invented.

Don't Heat!

Cheap!

Very Simple!



Accurate!

Works Fast!

Complete!

Lumbering Season, 1884

Saw Mill Owners in providing for the season of 1884, ought not to lose sight of ROGERS' SAW GUMMER for it will save them more money in proportion to the amount invested than any other machine.

Only $30, including Emery Wheel; Table and Countershaft, $10 extra.

A few of ROGERS' SAW GUMMERS were put on the market last season, and we quote some of the commendations received:

JAS. HADDEN, Foxmead, says:—
"Your machine is all I expected."

CHAS. ANDERSON, Anton Mills, says:—
"I have given it a good trial, and am well pleased with it. "I find it is one of the indispensables in a saw mill." * *

ROBT. R. WEIR, Orillia, writes:—
"It works like a charm, and is very accurate in its work."

CRONE & PATTON, Hoc Roc Mills, Gravenhurst, says:
"The Rogers' Saw Gummer purchased from you gives "good satisfaction, * * it cannot be beat."

D. DAVIDSON, Pentanguishene, writes:—
"We are well pleased with the Gummer."

W. W. BELDING, Wyevale, writes:—
"I have the Gummer running and it is giving good "satisfaction."

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Hart Emery Wheel Company, Limited - Hamilton, Ont.

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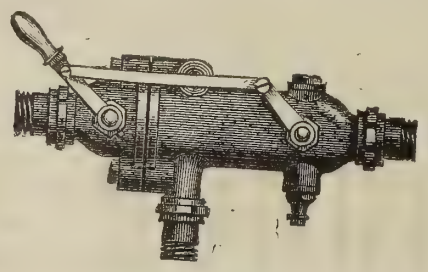
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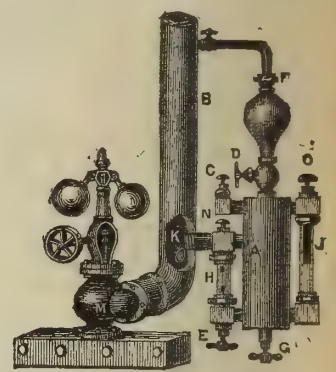
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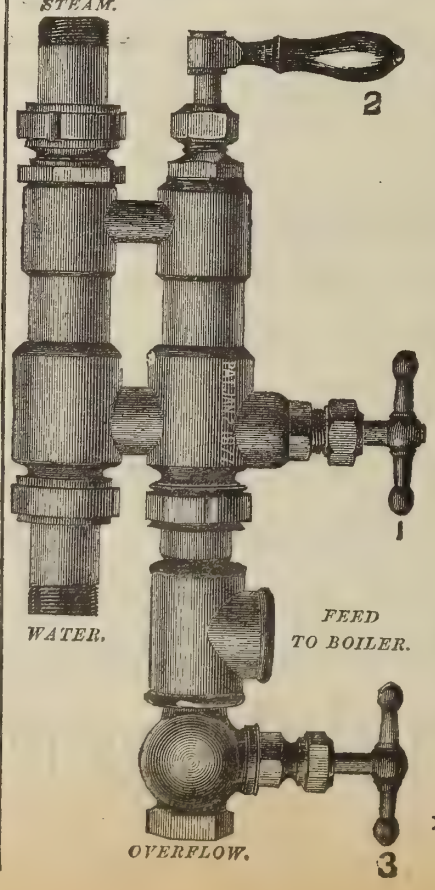
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☞TO ADVERTISERS.

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———CHEAPEST, BEST, MOST RELIABLE and ONLY TRUE MEDIUM———

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SAW MILL AND GENERAL MACHINERY.

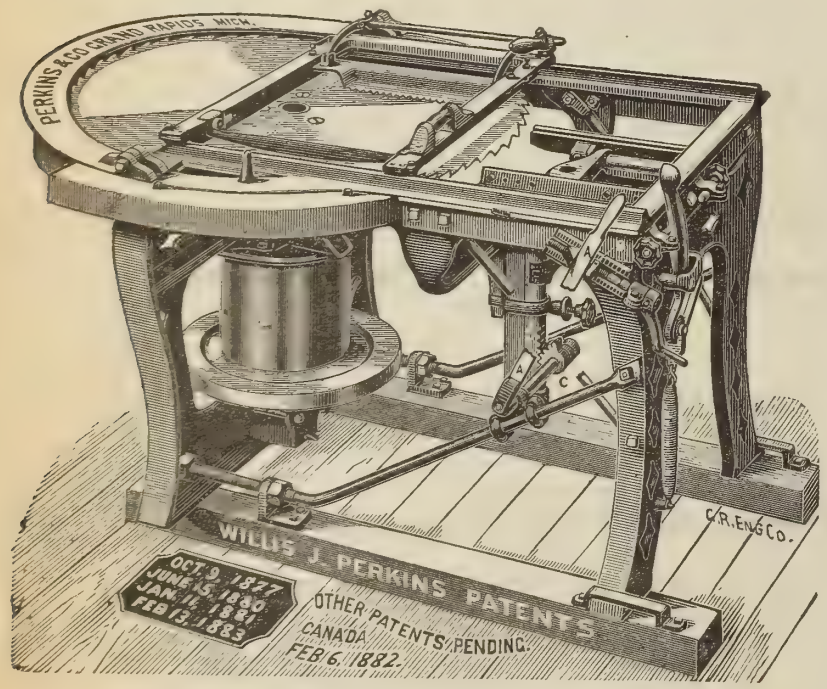
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We wish to call the attention of our Canadian Lumbermen to our First Class HEAVY SAW MILL MACHINERY for Circular Mills and Circular and Gang Mills of the most improved designs. We are prepared to submit Plans and Specifications, together with any information that our many years of close application to the Saw Mill Business may have suggested to us, also when required to enter into contract for building and supplying the machinery complete, superintending the starting of the same, and handing over the mill to its owner in first-class running order.

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PERKIN'S PATENT SHINGLE MACHINE.

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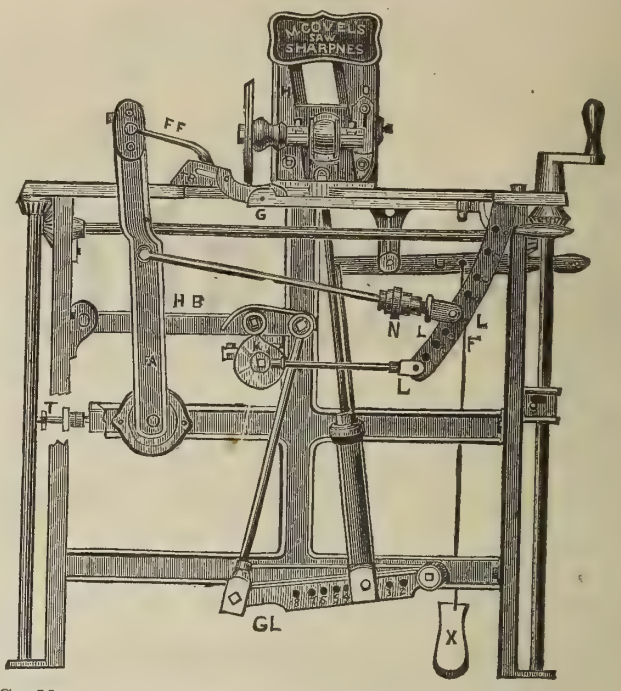
Willis J. Perkins' Drop Tilt!

The only Horizontal Saw Machine on which a thick slab can be cut from the bolt.

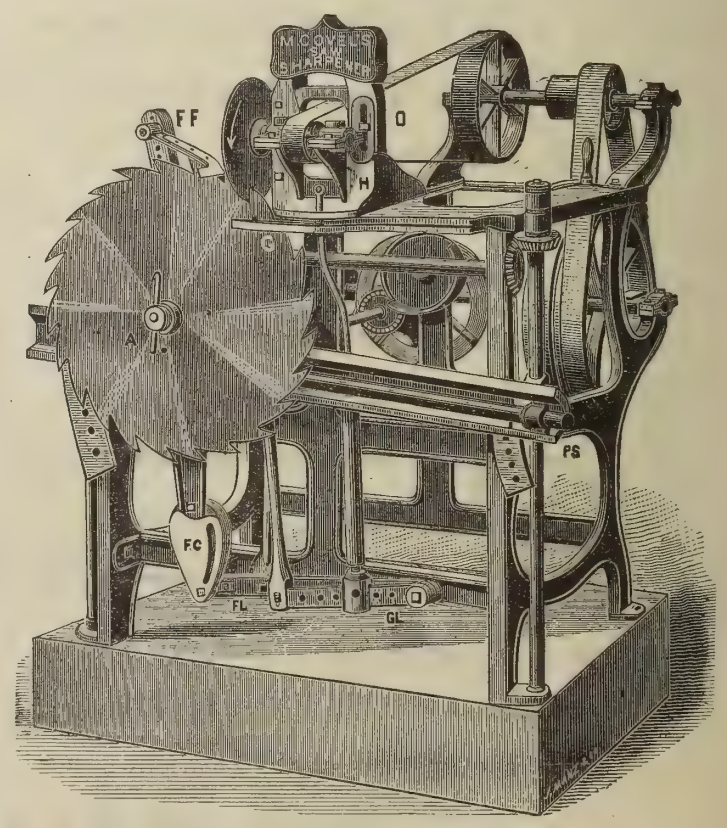
☞ *SECOND CUT ALWAYS A SHINGLE.*

Knots, rots, hearts, bolt squared rift-ways, and all irregularities cut off at one clip. This improvement will pay the price of the whole machine every season by increase of quality and quantity cut.

THE M. COVEL PATENT SAW SHARPENER.



The above Cut No. 1 shows some very important changes that have lately been made, which makes the machines far less complicated for new beginners to operate. Cut No. 2 shows this machine with a circular saw upon it ready for operation.



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VOL. 4. PETERBOROUGH, ONT., MAY 15, 1884. NO. 10.

TREE PLANTING IN QUEBEC.

In the Quebec Legislative assembly on April 22 Mr. Casavant prensented the report of the agricultural committee, recommending that 5,000 pamphlets on tree-planting be printed, at two cents per copy and circulated. Some discussion arose, Mr. Beaubien having drawn attention to the unsuitability of the day fixed by the committee for tree-planting. Objection was also taken to the expense of the pamphlets recommended. Messrs. Mercier and McShane admitted that the present was only a small item, but too many persons were now being subsidized because of political services.

Mr. FAUCHER remarked on the amount of useful literature distributed in Ontario, and thought the present work was one of great usefulness.

Hon. Mr. LYNCH said the committee on agriculture had this morning met to consider the fixing of a day for tree-planting. He regretted that it had been impossible to fix one uniform day for the entire Province, but he had yielded to the superior wisdom of the Committee.

Mr. JOLY observed that it would be difficult to find a more concise work on tree-planting than that of Mr. Chapais, which it was proposed to print, and though he objected to the increasing expenditure, he readily agreed to having the pamphlets printed. He should like to have had a uniform day fixed as a holiday for tree-planting, but saw a difficulty between the conditions of the eastern and western sections. He hoped that the committee would again be called together to reconsider the fixing of the 7th May for the western and 16th May for the eastern sections.

Mr. BEAUBIEN said the cost of the pamphlets was not excessive. He should like to have an opportunity of addressing the committee on the date for tree-planting.

Mr. CASAVANT agreed that Mr. Beaubien should be heard to-morrow, and with this understanding the report was adopted.

In the agricultural committee next morning, after remarks from Mr. Beaubien, Mr. Joly, Mr. Lynch and others, it was decided to recommend to the house that, notwithstanding the difference of climate, it is not impossible to realize the idea of a uniform date for the Province for Arbor Day, and that the 12th of May be fixed this year. Suggestions to have it observed as a general holiday, and for an adjournment of the House from Friday the 9th to Tuesday the 13th May were favourably received.

THE COMING SEASON.

Monday April 28th witnessed all the saw mills with one exception in Ottawa in full operation. The buzz of the saw will be heard in Messrs. E. B. Eddy's, J. R. Booth's, Perley & Pattee's, Young's and Bronson & Weston's, McClymont's mill in New Edinburgh and Sherman. Hardman's & Lord's mill in Hu l began running this week. McLaren's mill at the Rideau Falls will not be ready to run until the end of May. All the old machinery in this mill has been removed and is being at present replaced by the most improved machinery. This mill when finished will be second to none, as regards equipment, in the Ottawa Valley. A lively season is anticipated and prospects are so cheery that the lumbermen feel warranted in running their mills day and night from the commencement. Heretofore night watches have not been set to work for a month or so after the mills opened. The demand in the American markets is very good indeed, but prices have not advanced. The electric light has been introduced into nearly all the mills at the Chaudiere. Perley & Pattee and J. R. Booth have adopted the Thompson & Houston light, and each firm has 20 lights. The United States Electric Light Co's. light is used in Young's and Bronson & Weston's mills. The former has ten lamps and the latter has twenty. Mr. E. B. Eddy has the Brush light and has forty lamps on his extensive premises. The loading of barges at the Chaudiere docks has already begun, and the first tow of the season will leave early next week. Twelve barges containing three million feet belonging to Mr. J. R. Booth will leave on Monday. This firm was the first to commence loading this season.—*Montreal Witness.*

A CHAPTER ON TREES.

A Brazilian wood, called quebrancho, found in large quantities in the valley of the La Plata, is of high value for mechanical and engineering purposes. This tree is about the same diameter as the average oak tree, but it has a shorter trunk. It is used for railway ties, telegraph poles, piles, and things of a like nature. This wood, when well seasoned, is very durable on account of its hardness. It is difficult to work. The color is that of a mahogany, but becomes deeper in time. This wood is rich in the oil of tannin, and a large portion of Brazilian leather is tanned with it.

The cypress, of which there are three varieties, the red, black, and white or bald, is gaining in favor every day in the south. It is heavier than white pine, as a substitute for which it is being used, by several hundred pounds more per thousand feet. This wood contains a very very small amount of resin, and a very high polish can be given it; in fact, because of its not being affected by moisture, it is being used for cisterns, hogsheads, and sugar, molasses and honey barrels. The red cypress is the favorite, and some of it is so heavy that it would sink upon being placed in the water. The white variety is much lighter and will float easily after being deadened shortly before cutting, but it has not the firm grain of the red. The red cypress has a straight trunk with a small top, and the bark when cut has a reddish tint.

Russian papers are full of talk about destruction of forests. Many Russian forests are becoming extinct. Within a century the area of forest in that country has been reduced from 11 per cent. in Twer, to 45 in Riazan. In many provinces wood is becoming very scarce, so great has been the destruction. Even the great forests along the Volga and Don, which extend a long way toward the Ural mountains, are destroyed. Only a fringe exists of the once celebrated chestnut wood of Vassilsursk, that dates back many years.—*Lumberman's Gazette.*

THE ADIRONDACK BILL.

The import of Senator Lansing's bill for the control of the Adirondack state lands, which has passed the upper house of the New York legislature, is synopsized as follows by the Potsdam *Courier and Freeman*:

It provides for the appointment of three commissioners with salaries of $2,000, who shall have an office in the new capital at Albany. Their duties shall be to locate the lands owned by the State, to "make and publish such reasonable rules and regulations for the use of said forest lands by the public as shall give the greatest amount of liberty in the use thereof consistent with the preservation of the forest;" to prevent trespass, make regulations for the prevention and extinguishment of fires, and to prevent overflow of land by the erection of dams. The commissioners are prohibited from granting the exclusive use of any portion of such forest lands or any lakes or rivers therein to any person or corporation. The bill gives no authority to cut timber, and the penalty for cutting down a tree is $5. The bill appropriates $15,000 for expenses of the commissioners. Senator Gilbert voted against the bill. He said the bill was one creating political positions for individuals, and it was more in the interests of certain persons than in the interest of the State. There was one Adirondack department already in existence. There was job written all over the bill from beginning to end. He denounced it as a job. He thought the bill was absolutely unnecessary.—*Northwestern Lumberman.*

ARBOR DAY AT BAY CITY.

Last Friday, April 25th, says the Bay City *Lumberman's Gazette* was Arbor Day appointed by Governor Begole, and although many citizens in the cities as well as in the rural districts complied with the spirit of the proclamation, there was an entire lack of anything like general compliance. We are sorry to be compelled to make this announcement, proceeds the *Gazette*, as we had hoped to be able to chronicle the fact that the suggestion that every man, woman and child in the state, as near as possible, had planted their Arbor Day offering, and that the public schools had lent their influence for the promotion of this beneficient movement. But like any undertaking, the prospective remuneration of which is in the dim future, or reserved for future generations, this subject of tree planting is difficult to inaugurate generally. The present generation appear to ignore the fact that they have appropriated to their own use the principal and interest of nature's productions, in the long years which have passed along down the ages, and are loth to replace even a tithe, of their appropriations. The agitation of this question, however, will not cease as there is already sufficient interest awakened to insure final triumph. It may be that the noble spirits that have made this subject a portion of their life work may not have the supreme satisfaction of beholding the long sought victory, but they may rest on the assurance that "their works will live after them," and that the spark they have kindled will ultimately be fanned into a flame which shall be productive of grand and glorious results.

A Wonderful Saw.

A circular saw was recently sent from New York to a Michigan match company, which was 6 ft. in diameter. It has 52 teeth and makes 672 revolutions per miuute, and is capable of making a ten in. to twelve in. cut with each revolution. It can saw off a 40 ft. plank, therefore, in an infinitesimal portion of a minute. This is not a solid saw but one of the new patterns in which the teeth are separate from the plate, and can be inserted and removed at pleasure. The teeth in the sort of saw of which this monster is a specimen are little curved bits of steel pointed like chisels at the cutting end. They fit into round sockets cut out of the edges of the saw plates, and their little chisel blades project slightly beyond the circle of the plate.

Paper Bottles.

Paper bottles are now made on a large scale in Germany and Austria. The paper must be well sized. The following is said to be a good recipe for the paper: Ten parts of rags, forty of straw, fifty of brown wood pulp. The paper is impregnated or coated on both sides with 60 parts of defibrinated fresh blood, 35 parts of lime powder, five parts of sulphate of alumina. After drying, ten or twelve rolled leaves are coated again, placed over each other and then placed in heated moulds. The albumen in the blood forms a combination on pressure with the lime which is perfectly proof against spirits, etc. The bottles are made in two pieces, which are joined afterwards.

A PARIS correspondent, writing to the *Sundswall Post*, suggests that it would be desirable to establish a society, with headquarters in Stockholm, for the management of the Swedish timber sales abroad through a limited number of agents.

ARBOR DAY.

A year ago for the first time the government of this province set apart a day for the special purpose of tree planting. The suggestion to which we owe so interesting and useful an anniversary came, we believe, from the Hon. H. G. Joly, who, in a little pamphlet published in 1882 on "The Returns of Forest Tree Culture," after referring to the benefit that had been derived from the usage in the United States, put the question, "Why should we not follow the example?" The movement of which Arbor Day is the pleasant and fruitful result only began in earnest within the last few years. Some twelve years ago the attention of the British Government was directed to the rapid disappearance of the most valuable forests in the colonies and dependencies of the Empire, but it was some time before statesmen realized the nature of the sacrifice that was going on. Finally in 1874 Her Majesty's Commissioner of Woods and Forests issued circulars to the governors and administrators of British possessions containing a number of questions to be answered as to the extent of woodland, the quality of timber, the amount cut yearly, the amount wasted by fire, the quantity remaining, and the means, if any, adopted for its preservation or restoration. In 1878 a published statement of the answers received revealed some startling facts as to the terrible waste that had been incurred and the danger, in some instances, of the total denudation of once valuable forest land. From our own Dominion the reports were quite as disheartening as from other parts of the empire. In 1873 the Crown Lands Commissioner of this province indicated the necessity, in view of possibly total exhaustion unless the waste was checked, of some comprehensive plan of restocking our deforested lands. At the same time in the United States the warning of the few far-seeing men who had long ago pointed out the danger began to be taken to heart. Forestry associations were founded and by articles in magazines, as well as pamphlets and books, the country was awakened to a sense of its peril. Prof. Hough, Mr. Egleston and other learned and earnest men made known what other communities had done in similar circumstances to prevent catastrophe. The forestry system of Germany was held up for example. In Prussia there are twenty millions of acres of forests, of which ten millions are the property of the state. The total income from these is $14,000,000, the expenses being $7,500,000, so that there is a clear profit of $6,500,000. Yet had it not been for the wise precautions adopted and the admirable system of forest management that has been in force for centuries, those great stretches of forest land would be bare deserts.

It was just when the agitation among our neighbors was fairly on foot that international courtesy, by seeming chance, gave the movement the direction and effectiveness in the good results of which we now share. Among those who came to this continent to be present at the Yorktown celebration were the representatives of the Von Steuben family. One of these gentlemen held the important office of Royal Chief Forester of the German Empire, and it was natural that his hosts would converse with him on the subject which was uppermost in many of their minds. The consequence was that valuable information was imparted at first hand to persons delighted to receive it, and not likely to let go for nothing. In the month of January, 1882, a number of gentlemen met in the office of Judge Warren Higley, Cincinnati, to discuss the whole question from the standpoint of American needs. A committee was formed, which wasted no time, for in April a forestry congress was held, at which Canada was not unrepresented, and in the following August a convention was held in this city, which resulted in the formation of an international association. One important feature in the convention's work was the influence which it brought to bear on the general, state, and provincial governments. The simultaneous meeting of the American Association for the Advancement of Science lent additional distinction to the *personale* of the Montreal convention, and there was no lack of interest on the part of our own statesmen and men of science.

Since then the work has not stood still in this province. The Arbor Day of last year was an experiment, and it was not to be expected that apathy would yield to enthusiasm all at once among the bulk of the people. But it undoubtedly did good. The very fact of devoting a bright spring day to the work of atoning for the cruel wastefulness of the past could not fail to impress people's minds. It was the inauguration of a new area. To the children especially, its significance was unmistakeably for good. It taught them the use of trees in the most practical way, showed that they served a purpose beneficial to soil, to climate, to scenery, that there was, in fact, no object in nature that conferred so many and so various booms on men and animals. This year the effect will be still more beneficial. The subject has, in the meantime, been fully discussed. Both in the city and the country questions will have been asked and answered. In the schools more attention will have been paid to natural history and the trained mind will be prepared to take an intelligent interest in the celebration. Much, of course, depends on the organization of those to whom the tree-planting is entrusted. In some of the states the ceremony of inaugurating groves in the parks and other public places and memorial trees bearing the names of illustrious citizens is made delightful to the whole population, processions and bands and speech making adding *eclat* to the occasion. It would be well if some similar plan were adopted to solemnize the day in this province. History and foresty and the duty of citizenship might thus be taught at once to the young and to the mature as well. Let the matter only be taken up in the right spirit and Arbor Day will not only be a welcome holiday, but one the most useful institutions.—*Montreal Gazette.*

FOREST FIRES.

BRISBIN, Pa., May 3.—Hoover, Hughes & Co.'s mill here caught from the forest fires surrounding this place, and at least two hundred and fifty other buildings are burned. Mrs. Donovan, an aged lady, was caught by the fire and burned to death. T. C. Cryal, engineer at Hoover's mill, remained at his post until he was surrounded by the fire, and compelled to bury himself in the earth to save being burned to death. It is feared he is fatally injured from inhaling the smoke and flame. It is understood the fire was started in the woods by Hungarians last Sunday, who took that method to clear small patches of ground on which to build huts.

HONSDALE, Pa., May 3.—The losses definitely stated by the fire at Brisbin now amount to $380,000, and the estimate of the total loss will amount to $1,036,000. The number of families homeless and destitute is about one thousand. Most of these are suffering for the necessaries of life. Supplies are coming in slowly, and the demand is great. Goods will be transported free to sufferers by the Pennsylvania railroad. The sufferers are mainly poor miners at work at the mines.

PETERSBURG, Va., May 3.—Detructive forest fires are burning in the Isle of Wight county, originating in the burning of a saw mill. The atmosphere of this city all day has been dark from the smoke, almost obscuring the sun at times.

EMPORIUM, Pa., May 3r—Forest fires in this section yesterday swept over at least 50,000 acres, destroying, as far as acertained, four large mills and thirty other buildings, besides an immense quantity of lumber and logs. The loss on property, mills, and lumber will amount to $100,000.

READING, Pa., May 3.—The Blue mountains, along the northern border of Berks county, are on fire in every direction. Serious danger is apprehended.

BABYLON, L. I., May 3.—Forest and meadow fires are raging in various points on Long Island, causing widespread destruction of property and much alarm among the inhabitants. Thousands of acres of valuable timber are being destroyed. The smoke is so dense that horses are overcome by it.

ASHLAND, Pa., May 3.—The danger from the forest fires is believed to be over. Four farm houses and outhouses, with stocks, are destroyed. A man named Westhaffer is missing; supposed to have perished. Forty-five to fifty square miles of timber have been burned. The damage is estimated at $112,000.

MOUNT CARMEL, Pa., May 3.—Mine Hill Gap colliery is in great danger from forest fires. Work is suspended.

PHILADELPHIA, May 3.—The mountain fires are assuming dangerous proportions. Hundreds of people are fighting them. On the Blue mountians, near Wind Gap, and on Pocotomo mountains the flames are making great headway. The woods are very dry for want of rain. The smoke is terrible, people can hardly breath. Turkey river and West Shenandoah collieries were in danger yesterday afternoon; the fire department of Shenandoah saved the breakers by keeping them wet. It was thought the fire would reach Elan Gowen colliery during the night. It is rumoured the Union pipe line is on fire at St. Mary's on the Philadelphia and Erie railroad. In some places trains are compelled to run through the fire for miles.

MATAWAN. N. J., May 4.—The fires in the pines south of here are burning with greater vigor than ever. The damage cannot be estimated. The woods at Browntown have again started, and farmers are fighting the flames. The loss there is placed at nearly $50,000. The huckleberry crop, which brought hundreds of dollars to poor people in this vicinity, is entirely destroyed.

KINGSTON, N. J., May 4.—Forest fires still continue hereabouts. It is reported two men lost their lives while fighting the fire in the Shawangunk mountains. In the Catskills a large mill owned by Keator was destroyed. Hussey Hill, in the town of Esop, is all in a blace last night and to-day.

TRADE WITH AUSTRALIA.

The following letter appears in the London, Ontario, *Free Press*:—

DEAR SIR,—I noticed from a news item in your paper of this morning, that the value of United States exports to Australia and New Zealand, last year, amounted to $6,730,000, and those from Great Britain amounted to $91,000,000. The American exports covered agricultural implements, carriages and carts, drugs, iron and steel manufactures, leather, kerosene, fish sewing machines, tobacco, lumber, furniture, and manufactures of wood. All of these industries are well represented within our Dominion. You very properly ask: "Why does not Canada bid for a larger proportion of this trade than she has done? We have as good facilities as the States in many branches of manufacture, and ought to be as well able, with preserverance, to find an outlet in Australia for our surplus products."

Our producers, manufacturers and mechanics, will heartily endorse your sentiments.

The Ontario Car and Foundry Co., of this city, have now an order in hand for 100 screw-lever dump cars for the Australian Government, upon which we are busily at work, for shipment via Boston this month. If this improved car—built from the designs and specifications of the United States Screw-Lever Dump Car Co.—and our work upon them give satisfaction, in Australia, there will be other large orders for railway cars and plant, secured for Canada through Mr. Carson Woods, of Messrs. Carson Woods, Rich & Co., Sydney, N. S. W., who has the placing of all such orders for the Government.

In order to influence these orders for Canada our Government should appoint this Mr. Carson Woods Commissioner for the Dominion, and our manufacturers, etc., could get all necessary information through him relating to business matters for the fuller development of our trade with this colony.

Yours truly,

London, May 3, 1884. THOMAS MUIR.

International Forestry Exhibition.

The only province of the Dominion taking part in the International Forestry Exhibition at Edinburgh this year is New Brunswick. Mr. Cadell, the secretary of the exhibition, writes that "the prospects of a successful exhibition are assured, contributions having been promised from India, China, Japan, British Guinea, Sierra Leone, the Mauritius, Gambia, Australia, Tasmania, the West Indies, Borneo, Denmark, Norway, Sweden, the United States, Russia, and, in fact, nearly all countries except Canada, the absence of which will be very conspicuous and unfortunate. The building is nearly complete, and our arrangements are in a forward state." Mr. Cadell also states that four hundred feet have been engaged by the government of New Brunswick.—*Montreal Gazette.*

AN AMERICAN SAMPLE ROOM AT TURIN, ITALY.

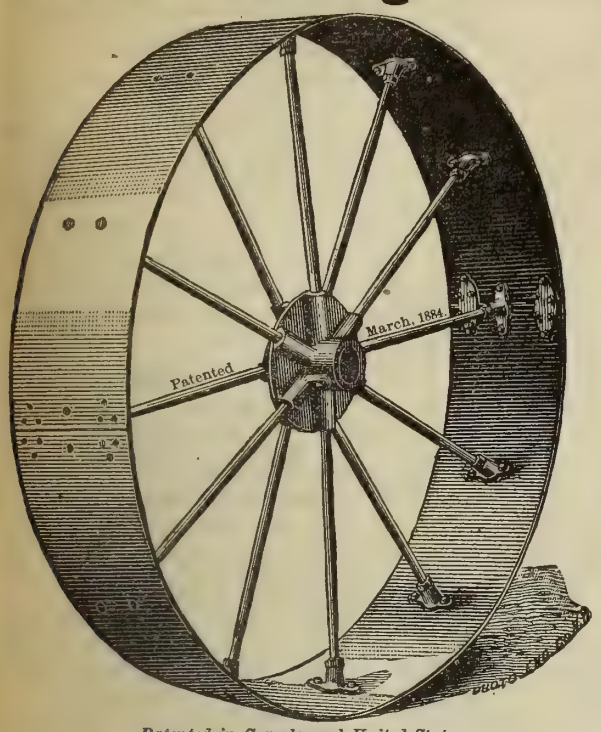
By the consular report for March we notice that the Vice and Deputy Consul De Zeyk in Turin, Italy, is making arrangements to establish a sample room under the direct control of that consulate at which, by the beginning of March, 1884, arrangements will have been concluded to receive goods desfined for exhibition. Turin is in a central position from whence goods may in the shortest and cheapest way be transported to any other port of Italy. It is in the immediate neighborhood of the by far most frequently visited port of Genoa, between which and our Atlantic coast there has long existed direct shipping commerce, there being now a number of steamship lines engaged in the trade. Turin and vicinity possesses quite extensive establishments of cotton, hemp, woolen, paper, etc., mills, machine shops, cast iron foundries, a military arsenal, fire arms, and gun factory, and can be put down for the chief marketing place for at least Northern Italy, where for a city, of 250,000 inhabitants, there is almost an extraordinary lively trade and brisk demand for the staple articles of almost every country in the world. Goods will be received at the above named sample room upon conditions that all freights will be prepaid by the shippers so that goods shall be delivered, free of all charges, to care of vice consul at Turin, and that he will not be responsible to shippers, owners, or their agents in any cases of partial damages or entire loss of goods happening before their delivery to his care. Goods can best be forwarded via New York and Genoa, through Phelps Bros. & Co., 54 and 56 Broad street, New York, who will also effect the custom house clearances, at Genoa and the proper delivery of packages, etc., to the vice consul at Turin according to invoices, which, together with written instructions as to the final disposition of the sample goods, must invariably be sent to his address, stating the exact amount and the price at which the goods can be disposed of, in which case the proceeds will, after the deduction of a reasonable commission for the covering of sundry expenses for storage, insurance, clerkhire, porterage, etc., be duly remitted to the shipper, and when the goods are to be returned, a commission must be remited to the vice consul at the same time with the order for reshipment. Among the importations recommended are household furniture, wool, carpets, Brussels two or three ply, petroleum lamps, improved fixtures, and new styles, steam engines from two to three horse power with and without steam boilers, india rubber and leather beltings, light wood working machinery, agricultural machinery, small dimensions, portable forges and blowers, portable flour mills,, hydraulic jacks, common screw jacks, differential pulleys, revolvers, and good arms of precision, street locomotives, and small locomotives, from three to six horse power, for agricultural purposes. Parties interested may address A. J. De Zeyk, U. S. Consulate, Turin, Italy.

A BAD CASE OF STARVATION.—To starve the lungs by a lack of vital food contained in pure air. If the lungs are obstructed by colds, remove the accumulated phlegm with the safe and pleasant throat and lung remedy, Hagyard's Yellow Oil.

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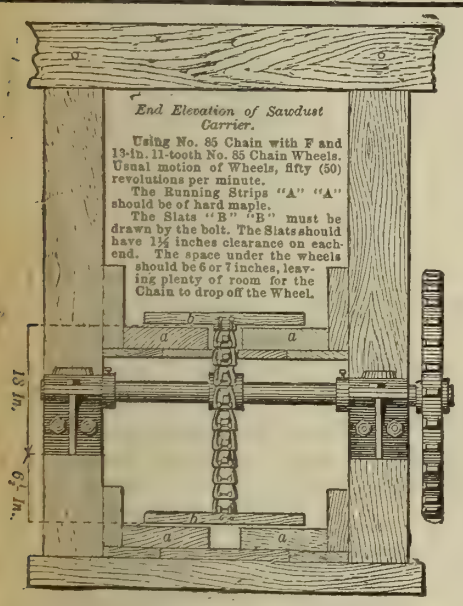
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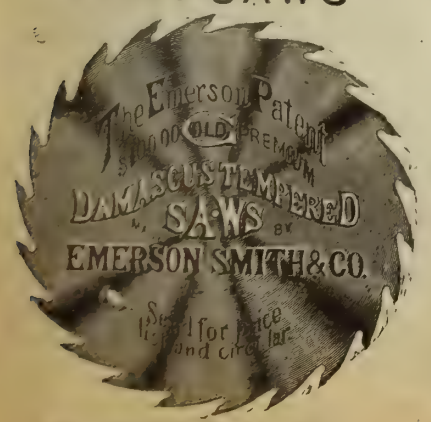
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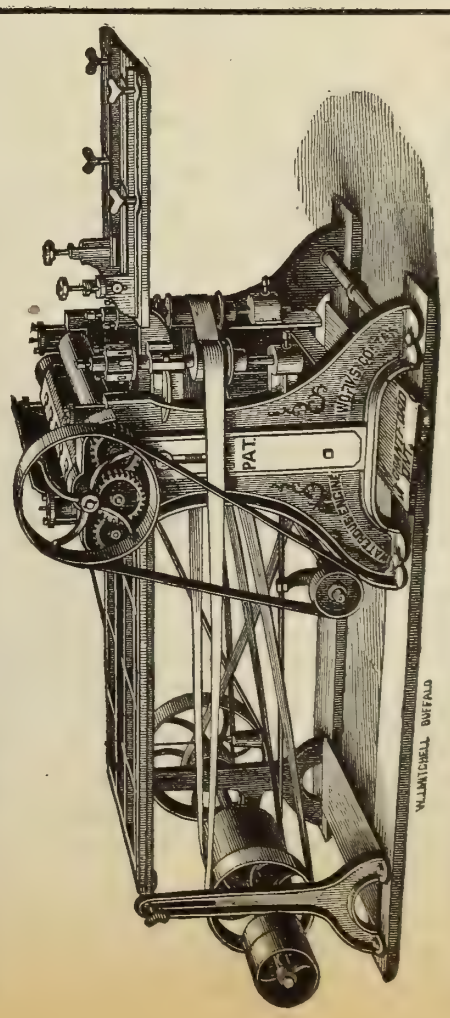
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52	"	20	"	"	6	"	73	" 20 " " 8 "	
101	"	18	"	"	8	"	51	" 16 " " 8 "	
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AUSTRALIA.

The Monthly Circular of Lord & Hughes timber brokers of Melbourne, dated Wednesday, 12th March, 1884, is as follows:—

Our last report was under date of 13th Feb., since which we have to report lighter arrivals from the Baltic ports, and offerings not so heavy as previous month, with a further advance in Baltic deals and flooring. Oregon is also a little firmer, and prices slightly better are obtainable, while American shelving, in consequence of large arrivals, is not so firm; clear pine maintained its price, but not so eagerly sought after; slates also remain in good demand at about previous rates.

Trade from the yards continues exceptionally good and likely to remain so, as the building trade is very active, and large sales of building are being weekly made. We may confidently look to a continuance of activity.

The arrivals have been—Leviathan, from Laurvig, with red and white deals and flooring; Aristos, from Christiana, Sir Jamsetjee Family and Rollo, from Frederickstadt, with flooring; Hugo. from Gefle, Wanlock, from Soderham, with deal; Weser, from Quebec, with clear pine and spruce; Jeremiah Thompson, from Burrard Inlet, with Oregon timber, laths and pickets; Agata, from Boston, with clear pine, white pine, shelving, T. & G. ceiling, laths, slates, and plaster; Glengoil, Gulf of St. Vincent, Aviemore, Montrose, Oanduara, British Envoy, Aigburth, Glenmavis, and Catania, from Great Britain, with flooring, slates, lead, galvanized iron, cement and plaster; Waitemata, Vision, Robin Hood, Darcy Pratt, and Grassmere, from Kaipara; Rockhampton, from Mercury Bay, with Kauri pine; Cheviot and Wendouree, from Sydney, with cedar; Ly-ee-moon and Nemesis, from Sydney, with slates.

Red Deals.—Imports: 624 standard, 9,813 pieces. The arrivals have been Leviathan, from Laurvig, Hugo, from Gefle, Wanlock, from Soderham, and Rolo from Frederickstadt. On the 29th ulto., the cargo ex Gurli was offered at auction, resulting in the quittance of nearly the whole of the cargo, DDD 11x3 realising 6½d., 9x3 5⅝d. to 5½d., 7x3 5½d. to 5d., 7x2½ 5¼d. to 5d. at per running foot of 9x3. Sales have also been made of small parcels ex Zoila Einer Thambarskelver, and Loch Katrine.

Spruce Deals.—Imports: 20,074 pieces. The arrivals have been, Weser, from Quebec, with spruce; Leviathan, from Larvig, with Baltic white. On the 29th ulto. the spruce deals ex Halgerder, were offered at auction, but only a portion was sold.

Oregon Timber.—Imports: 1,079,949 feet super. This line arrived in the Jeremiah Thompson, from Burrard's Inlet, and was sold on 4th inst. at prices ranging from £6 15s. to £6 2s. 6d., and the balance ex Chrysolite, at £6 2s. 6d.

Lumber.—Imports: Clear pine, 142,583 feet super; white pine shelving, 93,129 feet super; T. and G. ceiling, 16,013 feet super. The arrivals have been Agate, from Boston, and Weser from Quebec. The parcel ex Agate is advertised for sale on 14th inst. Sales by auction have been of clear pine and ceiling, ex Blackadder, and balance of shelving ex Paramita, prices showing a decline on last month's rates.

Pitch Pine.—Imports: Nil. Auction sales: Nil.

Redwood.—Imports:—Nil. The only sale by auction has been balance of shipment ex Remijio, at a decline on previous rates.

Flooring and Weatherboards.—Imports: 4,322,440 feet lineal. The arrivals have been Leviathan, from Laurvig; Sir Jamsetjee Family and Rollo, from Frederickstadt; and Aristos, from Christiania. The cargo ex Sir Jamsetjee Family is advertised for sale on 14th instant. Sales by auction have been cargoes ex Electra, Einar Thambarskelver, and small lines ex Adele and Sabine, Drumblair, Loch Katrine, Firth of Clyde, and Loch Ness, the following being prices realized:—Red, 6x1⅛, 12s. 3d. to 11s. 6d.; 6x⅞, 9s. 3d. to 9s.; 6x¾, 5s. 9d.; 6x½, 5s. to 4s. 9d.; white, 6x1⅛, 9s. 9d. to 9s. 6d.; 6x⅞, 7s. 9d.; 6x¾, 5s. 9d. to 5s. 6d.; 6x½, 5s. to 4s. 5d.; 4-out weatherboards, 7s. to 6s. 9d. These prices show an advance on last month's rates.

Kauri Pine.—Imports: 1,411,119 feet super. The arrivals have been Waitemata, Vision, Robin Hood, Darcy Pratt, Grassmere, and Rockhampton. Sales by auction have been made ex Vision, Grassmere, Darcy Pratt, Waitemata, and Palace, sawn logs realising 14s. 9d. to 13s. 6d., and flitches, 16s. 6d. to 13s.

Cedar.—Imports: 10,400 feet super. This arrived ex steamers from Sydney. Sales by auction have been made of small parcels ex Sydney steamers, at 45s to 26s.

Red and White Pine (Colonial.)—Imports: Nil. Auction sales.—Nil.

Doors.—Imports: Nil.

Laths and Pickets.—Imports: Laths, 3,385 bundles; Pickets, 1,906 bundles. Sales by auction have been made of Oregon Laths, 4½-feet, at 37s. to 36s. 6d.; spruce, 4½-feet, 34s. 6d.; Baltic, 4½-feet, 25s. 6d. to 24s. 6d.; 4-feet, 20s. 6d. Pickets, Oregon, 4½-feet, at £7 15s.; 6-feet, at £8 10s.; spruce, 4½-feet, at £6 15s.

Slates.—Imports: 300,205 pieces. There have been no sales by auction during the month to report. Privately, a good demand exists at about last month's rates.

Plaster.—Imports: 120 barrels. There have been no sales by auction during the month.

Cement.—Imports: 2,800 barrels. The arrivals continue light and the market bare. Sales privately have been made of best brands at 15s. 6d. to 16s. Auction sales.—Nil.

Galvanised Iron.—Imports: 847 tons. Sales by auction have been made of small lines. Privately, best brands realised £20; inferior, £10 to £19 5s.

Hardwood.—Auction sales—29th February—Ex Southern Cross, 41 pieces 12x8 hardwood, at 7s. 6d. per 100 feet super.

Palings.—Imports: Nil. Auction sales: Nil.

Explanation.—Red deals and spruce deals are sold at per foot of 9x3; T. and G. flooring at per 1,000 feet running; Oregon timber, Redwood, clear pine, shelving and ceiling, per 1,000 feet snper; Kauri pine and cedar logs at per 100 feet super.; laths, pickets, and slates at per 1,000 pieces.

THE TRADE OF ARCHANGEL.

The Norwegian and Swedish General Consul in Archangel in his report writes as follows:—The awkward roads from Archangel to the interior prevent the possibility of import trade. The ships arrive, therefore, with few exceptions, in ballast, which, of course, in a substantial degree, increases the outward freights, and when to this is added that nothing has been done to ease the entrance into the port (the River Dwina cannot be navigated by vessels drawing more than 14 ft.), also that the harbour dues are unproportionately high, it is not difficult to understand the depression under which the trade of the place at present suffers. On account of these circumstances the prospects are poor, and it has also been seen that several trade houses, during the last year, partly have dissolved business, and partly have limited it to timber and other forest productions, which it seems will soon be the only export goods on which the district can depend.

Various circumstances—high prices of timber, severe constant conditions for purchase in the State forests, and recently great accidental fires at several timber yards—have, during the past year, restricted the development of the trade of the district, and especially of the Archangel timber trade. These difficulties appear now, in a great measure, to have been overcome, and, at the same time, the exporters have begun to see ther necessity of using the machines of the day to obtain cheaper labour and better use of the timber, and considering the position of the export trade as a whole, with the great wealth of the forests of the country and the remarkable quality of the timber, a considerable development of the timber trade of the district may certainly be expected. The quantity coming for shipment this year will, it is presumed, amount to about 45,000 St. Petersburgh standards.

QUEBEC'S FOREST PRODUCE.

In the course of a speech in the Quebec Legislative Assembly, the Hon. George Irvine, Q. C., expressed a very dispirited opinion about the great industry of this province—the timber trade. It was in a very bad way now, according to the honorable gentleman, and the prospects for the immediate future were by no means bright. It was not from an political motive, he declard, that he said this; he was simply stating a fact—a fact which had considerable importance for himself—as a warning to the Government not to depend very much on the probable revenue from the produce of the forests.

Enquiries by our representative in Quebec show that Mr. Irvine's opinion, gloomy as it is is not disputed by those most able to judge. Among other signs is the determination of Messrs. G. B. Hall & Co., to close down their famous Montmorency mills this season—for the first time, we believe, since the mills have been in existence. In connection with this matter it may be as well to state in few words the truth about Mr. Senecal's transactions with the Hall estate. Mr. Senecal paid the first instalment—$250,000—of the purchase money, and he has not yet paid the second instalment. But the contract has not fallen through on that account; the property really belongs to Mr. Senecal at the present moment.

The season having now fairly opened, we give, for the information of our readers, a review of the position and prospects of the timber trade; a review representing the opinions of some of the leading timber merchants in the city of Quebec.

In judging of the present position of the trade it is desirable to consider the two staple articles, namely, timber in the shape of what is commonly known as square and waney timber, and timber sawn up generally in the form of deals three inches thick. The annual consumption of the former for several years past has been falling off, being last year and this winter less than perhaps it has ever been recorded before. The present stock of square white pine is about seven and a half million feet; and although this is not more than about half the average stock of from seven to ten years ago, it appears to be far in exoess of what the market is likely to require. In waney pine the stock is rather larger than an average, but the demand for this wood is more uniform than for the square timber, as it is used more generally throughout Great Britain for pattern making and joinery purposes. The production during the past winter of square pine will probably be less than six million feet. This, again, is much under the average production of from five to ten years ago, it being then about eleven million. Although the production is so much reduced, still it is likely to be far in access of any demand that will arise, and it is seen every day that this trade is gradually dying away from Quebec. The causes for this are the increased production and cheapness of pitch pine, and the quantity formerly taken not being required for the purpose for which this square wood was used in England, iron beams, iron decks for ships, and cheaper woods, being substituted for our yellow pine.

In hardwoods a similar disappointing view has to be taken of the future of the trade. The opening of railways in Virginia, Tennessee, and other Southern states has given facilities for bringing the oak from the hill countries of those States, sawn out into dimension timber as required by the large consuming manufacturers in England, chiefly for waggon building, at prices far under what the Western States oak can be brought in the log to Quebec and shipped at. This feature this winter has been more felt than previously, because the manufacturers have improved so much in the production of these oak scantlings that they now answer the requirements of the most particular railway companies in England. As far as Canada is concerned, the oak is entirely cut away.

Another description of square timber, elm, is becoming more difficult to get, and the price has gone up so high as to preclude it from being used, excepting where it is especially provided for.

The stave trade of Quebec is rapidly going away, it being impossible to compete with the staves produced at a much lower cost on the Mississippi, and shipped from New Orleans in vast quantities, being carried across the Atlantic by the steamers at donnage rates, at much below the cost at which they can be shipped by sailing vessels from the St. Lawrence.

These are the chief features of the trade of Quebec, excepting as regards pine and spruce deals. Of the latter, the stimulated production in New Brunswick has completely closed some of the mills in Canada and reduced the production of the others. But this is probably only temporary and the losses that were made on the shipments of spruce deals from New Brunswick last year has already had its effect in reducing the production this winter by from 50 to 60 per cent. and there is no doubt that our spruce forests in Canada in a few years will increase very much in value.

In pine deals the trade is healthy, and the consumption in England very large, but the production has been in excess of the demand, and the shipments on shippers' account last year were in access of what the market could deal with in England, and the consequence was serious loss to those who consigned to England. But this is likely to remedy itself very quickly, as the production this winter will be certainly from 50 to 60 per cent. less than last year.—*Montreal Witness.*

Circular Saws.

The *Lumber World* says the Mechanics Association of Muehlhausen, in Germany, in their last annual report take a very decided ground against the use of circular saws, and advocate their abolition entirely wherever such action is possible. They base their conclusions upon the reasons that the use of circular saws involves more danger to the operators, that they require more power and waste more wood, and that their only advantage consists in a price smaller than that of band saws. The Germans use at the present day among their cabinet-makers carpenters and joiners, thirteen different varieties of saws, each of which has its own peculiar size of the teeth to each other. How important the thin saw blade is, not only as a means to save power, but also as a means to save wood, can be seen from the following. A log of walnut 4 metres long and 1 metre in diameter, cut into 20 pieces by the new horizontal saw frame saves 30 millimetres of wood when compared with the cutting of the old-fashioned vertical saws. This is equal to a profit of $9 to $12. For Germany, where annually 100,000 cubic metres of this wood is used in the various industries, this wood represent a saving of $37,000 to $50,000. The greatest enemies of saws are the particles and piececs of iron found in woods; these are often driven in some form into young trees, and succeeding growth covers them up entirely. A curious collection of such ingrown iron particles was recently exhibited in Germany. It had been obtained from America, Prussia, Germany, Spain, and other countries, and exhibited the queerest forms of wooden formation covering particles of iron of various shapes and sizes, whose presence was revealed only by a breaking of the teeth of the saw, and which without the cutting would have remained invisible to the human eye.

Ships for the Quebec Trade.

The Liverpool *Journal of Commerce* says:—An important shipping and commercial venture has been, or is being floated, in Greenock for the purpose of acquiring and sailing a number of wooden vessels in the Quebec timber trade. The capital, which has been fixed at £30,000 in 300 shares of £100 each, has been, we believe, pretty nearly subscribed, although in the meantime it is not intended to call up more than £75 or £80 per share. The name of the company is "The Clyde and St. Lawrence Shipping Co.," limited, and one of the main features of the company will be that, as a rule, insurance with underwriters will not be effected upon its ships, but the company will lay aside its own insurance funds. It only remains to be added that the promoters of the company are long established Clyde ship owners, and have had a lengthened experience in the management of ships in the lumber trade.

Danger Signals.—Reader, if you are troubled with pain, weakness, weariness and a dragging feeling in the small of the back, with thick, high colored—slimy urine, then you have alarming signals of danger, and should resort to Burdock Blood Bitters, the grand kidney regulator and blood and cleansing tonic.

THE OTTAWA TRADE.

As is well known the lumber industry is the staple industry of this city. Anything therefore that affects the lumber interests must as a necessity interfere with the general business of Ottawa and surrounding district. Under the circumstances it is pleasing to be able to state that for the coming season the outlook is on the whole satisfactory, although the prospect is not so good as last year. There is a preceptible stagnation—at any rate the lack of that briskness which one would like to see—in all kinds of business, and, as a matter of course, it extends to the lumber industry. Beyond this the trade is in a condition at which those interested, both employer and employee, cannot well grumble. With the exception of Messrs. McLaren & Co.'s mills, which are under repairs, all the others in this district have commenced operations. The amount of work done daily is about the same as usual. In fact this is no criterion as to the state of the trade. When a mill opens it is to the interest of the employer to do as much work as possible. He has to employ the same number of hands and therefore the more labor they do the better it pays him. The only way to ascertain whether there is a curtailment of the quantity of lumber sawed, or any idea of curtailing, is to find out when the mills do not run at night or when they shut down earlier in the season than the usual time. This is the only and true indication of a lessening of the output. It is quite probable, from all appearances, that there will be less night work this year than in the past, and that several of the mills, through scarcity of logs, will have to close operations in the fall earlier than has been the case heretofore. In most instances the logs were pretty well sawn out last season, and the cut during the winter was less than it has been for some time past. This was due to two causes. The slight decline in prices and dullness of the trade caused the majority of the lumbermen not to cut so much as otherwise would be the case, thereby lessening the supply, and as a natural cause raising the price; but perhaps the most potent reason was that the winter was not at all favorable for the work, there having been too much snow, which told badly against the progress of those employed in the woods. Men are actively engaged on the drive and the first of the logs, that is of the past season's cut, are making their appearance. The wages of the men employed both on the drive and at the mills is about the same as that paid last season. As to the prices obtained for lumber they are much about the same, but few sales have been made recently. Lumbermen imagine that by holding sales back as much as possible for a higher figure they will be able to get in most cases a price equal to that of last year, but the demand will not be the same. Of course they will keep sawing and piling so as to have the article ready for the market. What is now being shipped had been disposed of some time ago, and there is every reason to believe that shipping will be proceeded with actively for some time, which will have the effect of giving plenty of space whereon to pile the new sawn lumber. A scarcity of piling ground has been felt at the Chaudiere for some time past and lumbermen have been put to additional expense in shipping it elsewhere along the banks of the Ottawa. The reduction of 10 per cent. in the rates to American and Canadian ports will also tend somewhat to increase the quantity shipped. During the winter a large quantity of lumber was sent by rail, but now that navigation has opened the whole trade will nearly go by water, the difference in price being near $5 per car, which in the aggregate will amount to a considerable sum. A great proportion of the season's sales is expected to be large contracts, and this alone will hold prices down. Exact prices cannot as yet be quoted, and it is more than likely that quotations will be of a shifting character during the summer. Now that navigation has fully opened and the real push of the season has set in reliable figures will be obtained. It may be stated that the first shipment of the season was made from Mr. Booth's yard by Messrs. D. Murphy & Company.—*Ottawa Free Press.*

Subscribe for the CANADA LUMBERMAN.

St. John Spruce Deals.

The following letter appears in the English *Timber Trades Journal*:

SIR,—Permit me to draw attention to the old custom of spruce deal shippers from St. John, N. B., omitting to mark V on the 4th quality deals they export. I cannot tell how it happens that it should be ignored, unless it is to allow the merchants here a loophole to pass them along with higher qualities, which I know is often done; and I would suggest through the medium of your valuable Journal, that the St. John shippers revert to the old rule as early as possible, which will enable them to keep their name up againct other ports.—Yours truly,

SUFFERER.

Shipping of Great Ports.

During the course of last year 4,379 vessels entered the port of Antwerp, gauging a total 3,734,428 tons, which places Antwerp, as I have already stated, at the head of European ports. In 1882 the tonnage of Havre was only 2,200,000, that of Genoa 2,250,000, and of Bilbao 315,000, owing to its iron ore exports. Among the English ports a few only exceed Antwerp. London is still the first port in the world, with a tonnage of 10,421,000 tons, and Liverpool the second, with 7,351,000 tons; Newcatle follows with 6,000,000 tons, also in excess of Antwerp, but both Hull and Glasgow are below, with respectively 1,875,000 and 2,110,000 tons.—*Pall Mall Gazette.*

Wood Pulp.

The new processes for the preparation of wood pulp and cellulose are multiplying the whole time. The patent of Blitz for cellulose consists in taking two parts of hydrosulphite of soda, and one gram, in proportion to six kilos of the hydro-sulphite, of vanadate of ammonia in four grams of hydro-chloric acid. The wood after being cut up by the ordinary process, is then submitted to the action of the above mixture under a pressure of three or four atmospheres, and for four to eight hours. The pulp is next ground down. It possesses some of the qualities of rag pulp and looks much like it.

The Oldest Yew Tree in England.

The oldest yew tree in England is situated in Cowhurst Churchyard. It was mentioned by Aubry, in the reign of Charles I., as then measuring 10 yards in circumference at a height of 5 ft. from the ground. It is said, on the authority of De Candolle, to be 1,450 years old. Its present circumference is about 33 ft. In 1820 this old tree was hollowed out, and a cannon ball was found in the centre. A door has been made to the inside of the tree, where there is room for seats for 12 persons.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain and cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup for children teething. Its value is incalculable It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentery and diarrhoea regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system, Mrs. Winslow's Soothing Syrup for children teething is pleasant to the taste, and is the perscription of one of the oldest and best female nurses and physicians in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

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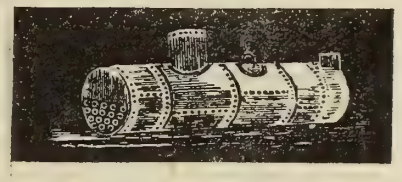
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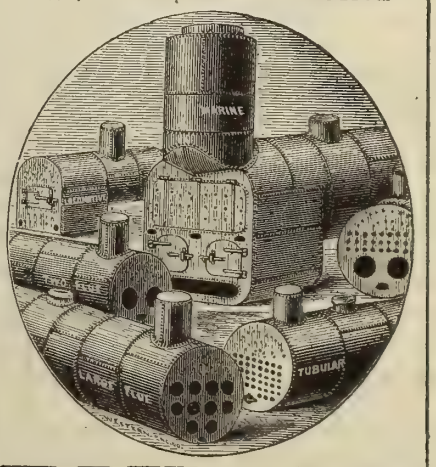
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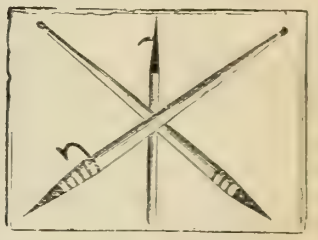
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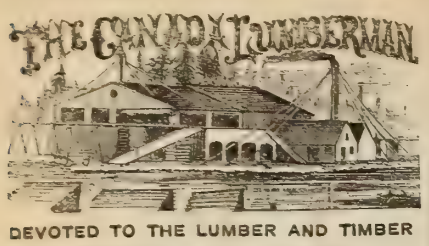


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The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., MAY 15, 1884.

LETTERS-PATENT have been issued at Ottawa, incorporating the Pigeon River Driving Association and Improvement Company, with a capital of $40,000.

MESSRS. Sereny & Fraser are building a saw mill on a beautiful Island in Lake Nipissing. It will be a very fine structure, fitted up with every modern improvement.—*Almonte Gazette.*

THE new bowl factory at Big Rapids is running two sets of hands, night and day, and averaging with one lathe 42 dozen assorted sized bowls. Machinery for the manufacture of all kinds of handles, potato mashers, rolling-pins, etc., is being added.

DEAN BROS. steam pump works Indianapolis, Ind., have furnished the Rust Owens Lumber Co., at Drummond, Wis., a system of water works, including pumping machinery, pipe and hydrants, having a capacity of one million gallons in twenty-four hours.

A COMPANY of English capitalists have taken hold of the business of the Northwest Lumbering Company, and the name of the concern is changed to the Northwest Timber Co., to suit English ideas it may be supposed. There will be no change in management, and Messrs. T. H. Carman and J. H. Bell will still be found in charge.

THE basket willow is in many sections a very profitable side crop, requiring little labor and often occupying land that would otherwise be of little value. The unpeeled willow sells readily at $20 to $25 per ton, while from three to six tons are grown per acre. The peeled willow is worth at the factory $100 per ton. A machine has lately been invented for pelling willow by horse or steam power, and this great disparity in price will not long exist. This machine will give a great impetus to the manufacture of willow ware. About $5,000,000 worth of willow has been imported into this country per year. As we can grow it profitably this importation should cease.

A PARTY from Hull or Ottawa are engaged in raising oak at the foot of Calumet. So far, they have succeeded in bringing up from the bottom of the river one hundred and tweuty pieces of choice timber, principally oak and birch. Parts of rafts have sunk here from time to time, and in one place it is said the timber lies in the bottom of the river in a tier of about ten feet deep.

IT has been decided to rebuild the Hudson Bay Company's steam mills recently destroyed by fire at Prince Albert, N. W. T. A gang of men s already in the woods at Edmonton getting out the necessary timber; new machinery will be ordered at once, and it is the intention to have the mill, which will combine all modern all modern improvements, in running order by the 1st of September.

A METHOD for rendering buildings fire-proof was tested in Chicago recently. The inventor claims for his design to confine the fire to the floor upon which it originated by covering the ceiling with thin sheet-iron, and placing between it and the joists three or four inches of ashes and above and around the space more ashes on which the floor is laid. The test proved all that inventor claimed for it, the joists not being damaged, although the heat was very great.

TWO hours after Messrs. Caldwell had received the annoucement of the decision in their case, they had telegraped to engage men to go up the river and bring down the logs that had been stopped by the strong arm of the law. The mill at Carleton Place will soon be a scene of busy life. Perhaps no more striking illustration of the power of law could be given than the logs referred to lying along the banks of the river, held there by the invisible hand of the law. It is said that Mr. Caldwell has entered an action for $200,000 damages. We hope a friendly settlement will be arrived at.—*Almonte Gazette.*

THE Pembroke *Observer* gives the particulars of what is certainly an extensive undertaking. The well-known lumberman, Mr. J. R. Booth, has commenced a rather extensive undertaking at Nipissing lake. As our readers are aware, Lake Nipissing enters into Georgian bay by means of the French river. Mr. Booth's limits are on Lake Nipissing, and the above fact would compel him, were things left as they are, to either take his timber to market by way of the Georgian bay, or ship it by the Canadian Pacific railway by way of Pembroke. After some consideration of the subject, Mr. Booth decided to do neither. Five miles from Lake Nipissing is Lake Nosbonsing, which connects with the Ottawa river by means of the Mattawa river. Mr. Booth determined to build a railway over these five miles, and thus get connection with the Nobonsing lake. This extensive task he has undertaken, and when the railway is completed he will employ the steamers which run on Lake Nipissing to tow his timber across the lake, and will then load it on the cars and convey it to Nosbonsing lake, where it will be thrown into the water and floated down by the Mattawa river to Mattawa villiage, and from thence by the Ottawa river past Pembroke and on to market. The railway will be furnished with rails, locomotives and cars of the best description, and barges are now being built to convey them accross lake Nipissing. The railway will cost about $100,000, and is certainly a big undertaking for one man, but he believes it will pay in the end. Mr. Booth is also building a steamer and barge to be used in towing purposes on Lake Nosbonsing.

THE PROSPECTS OF THE LUMBER TRADE.

The Bay City *Lumbeman's Gazette* has the following to say on this topic :—As has been previously noted the outlook for a good trade in lumber is quite favorable and unless the hot breath of politics shall exercise a withering effect upon them, there is no reason why the hopes excited by the opening activity of the season may not be realized. From every quarter comes word that building improvements in the large cities will be on an elaborate scale, necessitating a liberal consumption of stock. It may not seem quite consistent that the depression in manufacturing industries should have a curtailing influence upon the growth of cities, but nevertheless they continue to grow and the demand for additional accommodation is imperative. Bay City is but a type of other cities and here the activity is undiminished. All the large western cities and many of the eastern are feeling the expansive impulse, and unless the midsummer political craze shall prove unusually violent, the consumption of lumber is likely to continue throughout the season of building operations. The great metropolis is adding superb to superb and the market report of the *Record and Guide* says an increased consumption of lumber has certainly become an established fact and there is a tendency to further growth. There is no doubt that in New York City and dependent points a considerable amount of stock of all kinds will be wanted. At Albany the shipments of lumber have opened active and heavy. A good attendance of buyers have been in the market, who report a lively trade at their homes. The feature at Minneapolis was an advance of $1.00 in prices. caused by the steadiness of the demand and the bad outlook for the drives. At Chicago the yard trade is reported fair and the prospect good. The growing conviction that the tariff cannot be materially changed, if at all, this year, will tend to revive general business, and the conditions for a good trade in lumber will probably increase as the season advances.

QUEBEC CROWN LANDS REPORT

The report of the Commissioner of Crown Lands of the Province of Quebec for the fiscal year ended 30th June, 1883, presented to the Legislature of that Province last week, contains a large amount of interesting information. During the year 1882-83 202,898 acres of Crown lands were sold for $98,754.07, and the sum of $101,730.80 was received on account of these and previous sales. The amount collected on acount of lands sold for agricultural purposes was $72,016.33, for lands sold as mining locations, $27,012.15, and for lands sold at special prices on account of fishing rights pertaining to them, $2,702.32. 8,232 acres contained in one hundred lots on certain colonization roads were located as free grants. The receipts from timber dues, premiums, ground rents, interest, etc., on account of Woods and Forests amounted to $684,748.34, which, together with the foregoing and certain other fees and deposits form the total revenue of the Department of Crown Lands amounting to $856,872.45 for the period from 1st July, 1882, to 30th June, 1883—an increase of $38,589.34 over the preceding fiscal year. Of the $684,743 derived from Woods and Forests, the Upper Ottawa territory contributed more than half, namely, $454,148—the remainder being collected in fourteen agencies. The total area under a license in the Province during 1882-3 was 43,589 square miles, of which 18,570 miles were in the Upper Ottawa territory. The total number of pine saw logs cut in the Province was 2,611,986 pieces, of which 2,043,228 pieces were cut in the Ottawa district. Of 3,556,687 cubic feet of white pine timber the Upper Ottawa furnished 3,626,844 feet, and of 381,448 cubic feet of square red pine timber 376,967 feet came from the Ottawa; with the exception of boom timber the bulk of all other kinds of wood yielding revenue was cut in the fourteen agencies outside of the Ottawa country.

The Commissioner draws attention to the fact that the revenue from Woods and Forests exceeds that of the Ontario Department, from the same source, during the corresponding period by $222,425.20, although the comparison is hardly a fair one, inasmuch as the duty on square pine cut in the Province of Quebec is three-quarters of cent per cubic foot higher than the Ontario rate, and on saw logs about six cents greater.—*Ottawa Citizen.*

BUYING BLACK WALNUT.

Unusual quantities of black walnut lumber have been passing east from points in Ohio, Indiana, and Iowa for some weeks past says the Milwaukee *Sentinel.* The shipments have attracted much attention among lumber dealers, and it is learned that a company of English capitalists, with whom a wealthy combination in Indianapolis is co-operating, has been for a year or more quietly getting possession of all the black walnut timber it has been possible to buy, and is now shipping it to England. The traveller on the railroad through the walnut belt sees at nearly every important station portable steam saw mills at work early and late rip ping up black walnut logs into planks of convenient size for shipment.

The company has had buyers all through the states mentioned gathering up walnut trees wherever they could be found. In many cases the farmers have disposed of their trees at prices far below their value; it has only been recently that they have become aware of the scheme that is to take out of this country the most of the remaining black walnut timber in it. The consequence is that all the walnut the company now buys costs them donble the price they were paying a few month ago.

"If the original forests of Ohio and Indiana were now standing," said a gentleman of observation, "their valuation would be many times more than it is to-day under improvement. In making their farms the settlers in these states destroyed millions and millions of dollars' worth of black walnut, and the destruction ceased not more than twenty years ago. In searching for timber, I visited more than one farm where miles of fence were laid with walnut rails, and the fences are not old ones at that. This was in Bartholomew county, Indiana, which, with Jennings county, contains about all the walnut forests that are left in that state. One old farmer told me that he worked almost incessantly for ten years to clear away the walnut trees on his farm, and that he burned up more than 80 acres of the finest kind of timber. His farm, after 30 years of cultivation, could not be sold for more than $8,000. If it had its walnut trees back it would be worth $100,000. This farmer was an old settler in the state, and only one among hundreds of others who for more than 50 years girdled and cut and burned the great forests they found occupying the land. The English company will send to England probably $5,000,000 worth of walnut that they have purchased at almost nominal prices."—*Canadian Manufacturer.*

THUNDER BAY.

The Algoma Lumber Company are closing their business at Fort William and have sold their entire stock of lumber—estimated at half a million—to Mr. Thomas Marks. That gentleman in keeping with the enterprising spirit that he has always shown, has decided to build a planing mill of large capacity. The site for the new structure is in the V. at the south side of the approach to No. 3 Dock. The building will be 125 feet long by 60 feet in width. It will give employment to over 30 men, and will supply dressed lumber of all descriptions for the local and western markets.

The half million of lumber above referred to is chiefly dry finishing and upper grades, and will be manufactured into flooring and ceiling. It will be brought here from Fort William at once. The mill will be under the able superintendence of Mr. G. A. Priest, who favors us with these particulars. He says that the fuel which will be made through the operations of the mill, will be largely in excess of what would be required for their own power, and it has consequently been decided to provide steam power sufficient to run additional machinery which may be required by other factories which may in time be located there. The announcement of such progressive steps in this portion of the town will be greeted with satisfaction by property holders there.—*Sentinel.*

Moving Large Trees.

A Sarnia architect, Mr. Blaker, has done a notable thing in tree moving. He transplanted a handsom maple, which was one foot in diameter and 30 feet high, from one part of the town to another, hauling it by means of a capstan. It used to be thought a preposterous idea to move trees of such dimensions, but it is now found to be the easiest, quickest and cheapmade of establighing shade trees in parks and boulevards. The large trees which were transplanted in Victoria Park three years ago are thriving well.—*London Free Press.*

IMPROVEMENTS IN MEN AND MACHINES.

It would be a curious study to ascertain how far the improvement in machines and in tools had kept pace with that in the skilled mechanic. One thing is certain, at the beginning of the inquiry, that a skilled mechanic is of just as much value to-day as ever. How much he has improved is a question for scientific examination rather than one for absolute statement. It would be a queer assertion that the men of fifty years ago were inferior to those of the present. All the facts of the past, as well as those of the present, show that our present mechanics are no more mechanics than those of half a century ago. All the great improvements in hand tools and machine tools for the last fifty years have come from the individual efforts of men who had done their work before the advent of machine and automatic tools. These men—these workmen and inventors—made possibilities out of suggestions, and realities out of imaginings. To them belong the realities of the present machine shop.

It would seem from this that it is not the tools and the appliances that make the workmen, but the workmen who make the tools. There are just as good mechanics to-day, with all our mechanical appliances for good work, as there were when every job required a new arrangement of tools for work. In fact, the improvement in machines presupposes the capacity of the machine makers.

And yet these improvements have their influence on the workman; the better the tool the more active the workman. There are grey headed, almost superannuated, workmen in our shops who have voiuntarily discarded all their old time notions to take up with some "new fangled trick" that has been proved to be an advance toward perfection. Every improvement in tools—induced and perfected by mechancs—tends to an advance in the true mechanical improvement of the workman.—*Scientific American.*

Russian Ash.

Amongst the recent arrivals in Hull was a cargo of Russian ash, consisting of 1,311 pieces, shipped from Libau by the Wanderer. This has been imported by an inland firm largely engaged in the bobbin turning business, and is intended to be used in its own trade. It consists of ash butts, very straight, sound, and clean, and if its import grows into a trade, as we anticipate, it will seriously effect the import of Baltic birch. The advantage it possesses over birch is that it will not taint and decay in passage or in stock in this country. Beyond this, the larger logs, if white, have a market amongst cabinet makers and coach-builders. Like the English ash, it is subject to growing brown or black-hearted, but, unlike that of home growth, it is kind, soft, and tender—so much so that it is used for drawer making and other parts of furniture. In Russia itself this ash is used for door-making, office-fitting, etc.—a fact that in itself marks a wide distinction between Russian and English ash.

Demand for Birch.

The birch lumber demand has taken a new start on account of its use in the floors of skating rinks—as every smart town or village now-a-days has to have a skating rink as well as an opera house. The Whitehall, N. Y., lumber company, which deals largely in birch, has lately received orders from every direction for birch plank to be used in rinks. Thus it is that the ever varying wants and freaks of our modern civilized society develope new uses for the woods of the forests. There is no timber so mean despised to-day that may not be in urgent demand to-morrow.

A Rare Event.

It is seldom that the shipment of a cargo of lumber from Bay City to Canada can be chronicled, and it seems strange that such a shipment should be made, notwithstanding that Canada lumber often finds a market over the line. The Canadian schooner Ontonabee cleared on the 3rd inst. for Sarnia with a cargo of lumber to stock a yard at that place.—*Lumberman's Gazette.*

Friends of the Forests.

WASHINGTON, May 7.—The American Forestry Congress met this morning in the Agricultural Building. The Congress passed resolutions to the effect that it had witnessed with great satisfaction the attempt of the State of New York to preserve, protect, and regulate the sale of lumber in forests at the headwaters of the Hudson and Mohawk Rivers, and declaring legislation in this direction should be encouraged in all the States of the Union, and recommending the establishment of experimental stations and forestry commissioners by the States, and the aid of the Federal Government by appropriate legislation for the care and development of forests.

DRILLING square holes, says the *Mechanical Engineer*, used to be considered one of the impossibilities of the workshop, but some one with more ingenuity than sense contrived to do it. Turning square posts, however, is an accomplished fact, and machines for doing such work are in daily use. Square balnster posts, table legs, etc., are now produced moulded or plain in large quantities.

IT IS NATURAL.—It is natural for some people to be bilious, being often a result of peculiar bilious temperment, which with high living, too greecy food, indigestion from inactive liver, is the frequent cause. The remedy above all others, is Burdock Blood Bitters, It is highly curative for all biliary complaints, and far better than physic for inactive conditions of the bowels.

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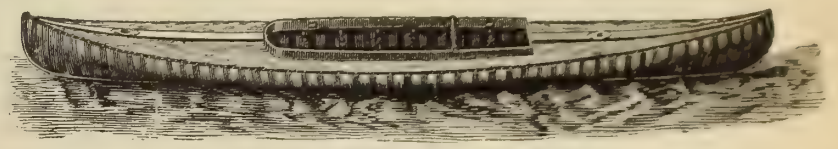
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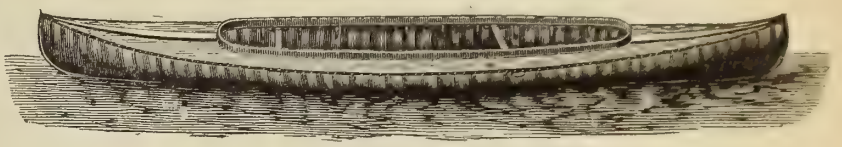
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FORESTRY.

We continue in this issue extracts from the proceedings of the winter meeting of the Fruit Growers' Association of Ontario :—

A MEMBER.—I should like to ask if any member present has any knowledge of the Catalpa.

MR. BUCKE.—It has been grown at Sarnia. It is not hardy.

COL. MCGILL.—I would like to ask the gentleman who spoke of our American cusins coming over and paying such high prices for black walnut stumps if he knew what they turned them into.

MR. ARNOLD.—They make them into veneer.

MR. BUCKE.—They also make gun stocks out of them.

COL. MCGILL.—Not of the stumps ; they are not long enough.

MR. A. M. SMITH.—A question was asked with regard to the Catalpa. At Grimsby it stands the winter very well. A tree I planted there some five years ago is growing very well.

MR. GILCHRIST.—I saw a catalpa planted in Huron this year, growing very well.

MR. WRIGHT.—Along the sides of roads in our part of the country they principally plant hard maples, and some of them plant the soft maple. The soft maple does not, of course, stand the winter nearly so well as the hard maple. The basswood is grown very largely, because, when it is planted along the roadside and has a chance to spread its limbs, you would hardly recognize it from having seen it only in the forest. Some of them are to be seen in Quebec about the old English cathedral. Apart from their appearance they make excellent bee pasture, and in northern counties where we have not the same abundance of flowers that we have here, that becomes a matter of considerable importance to us. Another tree that we are planting considerably in our locality is the Red river maple. It grows very well with us. A man who was out in Manitoba four years ago brought four little trees home from there, and now you would be surprised to see the size they have grown to. Last fall he showed me some specimens already six feet high that he had grown from the seed from those Red river maples. With reference to evergreens, the tree which we have found to do the best with us is the Norway spruce. The Canada balsam does very well, but when it grows up to a certain height the top is easily broken off by the wind. Cedars, of course, do very well with us. They make a fine wind-break and look very well too. With reference to the way to induce people to plant trees along the high-ways, in the gardens, and so forth, I have found that the best plan of all is to set a really good example for them to follow. After having set out trees myself I have noticed that a great many have come to me and asked me how much it cost ; and when they found how little it cost they have gone to work and planted trees themselves. I am a school trustee, and as such I have induced the Board to plant trees around our public school, and that has served as a good example, which has been followed by a good many people.

MR. GILCHRIST.—There was some seed of the Red river maple sent to me two years ago. It is a beautiful tree and grows very fast. The leaves have a purplish tinge.

THE PRESIDENT.—The trouble with that tree is that it does not grow to any size. It is not more than a large bush, or a small tree at any rate. For forestry purposes it would scarcely be desirable where other more valuable trees would grow. Rev. Dr. Wild is in the room, and we know that he takes a great interest in tree planting. We would like to have a word from him.

REV. DR. WILD said that as a minister he was somewhat interested in trees. He believed they were a regulator of climate, and that they were a great advantage to us in many things. He had perhaps five thousand trees. Three thousand of them were good bearing apple trees, a few hundred of them were pears, and a few hundred of them plums and peaches. Besides these he had a good grapery. This was work enough for a minister, and a minister always lost money in farming—one could not do more than one thing at a time he supposed. He had on his farm nearly every kind of nut tree that would grow in Canada, so that he could grow all his own nuts. He was very much interested in what this society was doing. If he ever retired from the ministry it was his great desire to turn his attention more fully to planting trees. He believed that was a thing we would have to come to in Canada. The great destruction of our forests was making a very great change in our climate. We had almost destroyed our spring and our autumn. In fact he thought that, if we continued as we were doing now, we should at length have but two seasons —that is, winter and summer. The streams were drying up too. If we could have a law which would induce farmers to plant trees along the sides of the road and other places it would make a great difference in our grains and fruits. On his place he had a half circle of pine trees, which just left his orchard open to the sun, and there he was able to grow peaches—what none of his neighbors could do.

THE PRESIDENT.—Will Dr. Wild tell us where his place is ?

DR. WILD.—It is at Bronte. I suppose my orchard is just about forty acres in extent, and yet towards the lower end of it I will suffer from the wind. The small peaches that I planted out there were killed last spring, but those up near this grove are living. The trees are small, thin ones ; yet the shelter is some advantage to them. I read as carefully on anything of this kind as I do on the current ideas of theology. I thank your for you invitation. I am glad to see you, and wish you great success.

MR. PAGE.—I fully agree with the remarks of the gentlemen who have preceeded me, not only with regard to the way in which tree planting may be made to beautify the country and with regard to the value of trees in respect of their timber, but also with reference to the influence which trees have, as Dr. Wild has pointed out, on the climate and rainfall of the country. I have been pleased to hear the remarks which have been made to-day on the subject, and hope that what has been said may go out through the country and stir up among the people an interest in the planting of trees. Every man who owns the ground to put a tree upon should make it a point to plant at least one tree of some kind. We have very many native trees of importance in this country. We have no lack of trees for planting. The speakers before me either have forgotten or are not at present acquainted with the fact that our legislatures have taken measures in this last session to encourage the planting of trees.

MR. DEMPSEY.—In a certain section of the country I know a very nice grove or belt of trees that is growing along the roadside composed of pines, oaks, grey walnuts and some other varieties that have attained a size sufficient for saw logs ; and these trees, it occurs to me, have a worse enemy than the animals that run on the highway, for the Municipal Council has offered those trees for sale. Now, the attention of our legislators should, I think, be drawn to cases of this kind. Those trees happen to stand just within the bounds of the highway, and really they are beautiful. I pass them as often as twelve times a week—sometimes more than that—and I am sorry that they should be offered for sale. I do not feel able to buy them to leave them standing—I do not know that I should be expected to do so ; but I should like to see this thing prohibited if possible. Only a year ago there was a nice little belt of pines that had not got sufficiently large to make timber of, but which would make cordwood, was sold, and those trees were chopped up into cordwood and taken away. I think if our Legislature would impose a penalty of not less than ten dollars and not more than one hundred dollars, or something like that, upon any person found injuring or cutting a tree along the roadside, it might put a stop to this kind of thing. With respect to varieties to plant for profit, I do not know of any variety that occurs to me that would be so profitable as the black walnut. Some say they are tender in a great part of the country ; but in our county of Prince Edward, which is certainly a severe climate, I know of one walnut tree that would make two standard saw-logs, and it has only been one generation growing. I know of another that has attained the size of one of those pillars there. I fancy that any variety of tree that could be planted would eventually prove remunerative. The butternut, or grey walnut, grows very rapidly. We find it growing very far north, and it runs up and makes very pretty lumber. I believe it is anxiously sought for, and it takes the place largely of the black walnut. I would perfer black walnut where it will grow, and I believe it will grow over nearly the whole of our Province.

MR. WRIGHT.—The butternut grows well in our locality ; but I have never been able to transplant it and have it live.

MR. BUCKE.—I have transplanted it when small after growing it from seed.

A MEMBER.—I have found no difficuty in transplanting it.

MR. BUCKE.—I am told there are trees of the *Acer Negundo* of a large size growing on the banks of the Don. Mr. Saunders said it was only a large shrub.

THE PRESIDENT.—Perhaps I should qualify that. They will grow probably thirty feet high.

MR. BUCKE.—They are very rapidly-growing trees.

A MEMBER.—Is there any other name for it ?

MR. BUCKE.—The Red river maple or the ash-leaved maple. I think we are blaming the want of forests a good deal for the drying up of our streams, when the fact is that it is owing greatly to the swamps being cleared up.

MR. DRURY.—I am sorry I did not have this meeting furnished with a copy of Mr. Wood's Act with reference to the planting of trees. If the late President of this Association had seen it he would have observed that the difficulty he speaks of has been overcome by a clause in the Act. Any man injuring a tree—even the Municipal Council—can now be proceeded against and fined. We have talked a good deal about tree planting in the past ; but it is with this as it is with other things—unless you have a little money to make it go it will not go. The Act provides that the trees be set thirty feet apart. An expenditure of $500 by a Municipal Council will plant 5,000 trees, and those planted thirty feet apart will extend for a distance of thirty miles, so that by the expenditure of $500 you can have a beautiful avenue of 15 miles of trees. I have seen it once in my life—I forget just where—miles and miles of highway planted systematically just as this Act contemplates that trees should be planted. I have no doubt that there are here to-day gentlemen of influence in the various municipalities ; there may be, and doubtless are, some who are representative men, and I do hope and sincerely believe that before another year has passed around, action will be taken in many municipalities to secure the carrying out of the aims and purposes of the Act which has lately been passed by the Legislature. I am quite satisfied that if it is found to be a success in one municipality, the people all over the province will speedily demand that their municipality go into tree planting also ; and that if they do, the value of their property will thereby be enhanced many millions of dollars in the estimation of those who are able to judge as to what gives value to a country.

MR. LESLIE.—There has been an Ontario Act for several years protecting trees planted upon public highways. It gives the people the right of property in those trees, and those who plant them cannot remove them, and no council can remove them, without giving something like two months' notice. In the present Act there is just one thing I would like to see altered, and that is with regard to trees planted along the boundary lines between farms. The distance now from the boundary line is six feet, and a man planting six feet six inches from the boundary line would get nothing. And if a man planted two rows of trees he would get nothing for the second row.

MR. DRURY.—That was to prevent the road being kept too wet.

MR. SLIGHT.—I have often been pained to see the way in which the telegraph companies deal with trees, and I never was more so than one time that I was driving near Barrie. There was a beautiful belt of pines there, which I much admired ; but the telegraph companies have come along there and utterly destroyed it in a disgraceful way. They might have taken out branches which would interfere with their wires ; but instead of that they have gone and completely destroyed trees without any necessity. I would make this motion :—

MR. SLIGHT moved, seconded by MR. PAGE, "That the Fruit Growers' Association protest strongly against she reckless way in which the telegraph companies unnecessarily destroy trees on streets in towns and on the country roads ; and that we would ask them to exercise all possible care in cutting off branches of trees, and that a copy of this resolution be sent by the Secretary to the telegraph companies, and that the Dominion Government be memorialized on behalf of the resolution." This was carried.

MR. HOPKINS.—I wish Mr. Slight would insert in that resolution a request to the Municipal Councils, that they pass by-laws preventing cattle running on the road side. If this is not done there is little use in our planting trees.

MR. ROY.—I hope the time is not far distant when fences will be done away with universally. I was down in the Eastern States this summer, and I saw miles and miles without a fence at all. There were strawberry beds and beds of various vegetables along the side of the roads, without any fence to protect them, and no harm came to them.

THE PRESIDENT.—I believe the telegaaph companies operate under their charters, which are obtained from the Dominion Government, and it might be well for this Association to memorialize the Dominion Government on the subject. I suppose that a Dominion Act will over-ride any Provincial Act, and I do not suppose that we have power to interfere with the telegraph companies legally.

MR. BEALL.—I would like to remove the impression, which it seems to me is an erroneous one, respecting the effects of the roadside planting of trees upon the road itself. The idea generally prevails that if trees are planted along the roadside, they will keep the road muddy longer than they would otherwise remain so, especially when the trees get up so that they will shade the road. Now, I believe it is proved beyond any doubt by the highest scientific authority we have, that the trees so planted actually dry the road by absorbing the moisture from below them. There are many instances on record of swamps having been dried up by the action of trees. There is one instance of a lake three feet deep having been entirely drained by means of trees which immediately surrounded it.

MR. REESOR.—I think that trees dry the road in dry weather, but not in wet weather. How does Mr. Beall account for this fact, that when you are driving through the woods you will come on a foot of snow in it, while outside the dust will be flying ?

MR. BEALL.—I am not speaking of the inside of a bush. Mr. Reesor knows very well that the wind is the principal cause of evaporation, and that where the wind can have full sweep upon a roadway, the result will be just what I have stated. In the woods it is different. There the wind has no chance whatever to dry up the moisture.

New Kiln.

The new kiln to burn the refuse from Mr. R. C. Smith's saw mill south of the river is up to its full height, 125 feet, and the brick lining is brick lining is being put in. The structure viewed from a distance, bears a remarkable resemblance to a huge round bottle, to which it would be almost exactly similar if it had a rim at the top. The work of erecting it has been watched with interest by our villagers, some of whom have toiled up the ladders reaching from platform to platform on the inside, and been well rewarded for their trouble by the splendid view they obtained of the surrounding country. The iron plates of which the kiln is constructed being all numbered, it is a simple though laborious job to put them together ; but the men who worked on the outside needed steady brains, as they stood in a sort of bucket hung by iron hooks to the edges of the top plates. The expense of getting rid of the rubbish from saw mills is a very serious one, and it is to be hoped that the kiln now nearly completed will prove able to withstand for several years the

tremendous heat generated within. We saw it stated a while ago that some person had patented a process by which gas of a superior quality, and at very much less than the present price, could be obtained from saw dust mixed with tar and some cheap chemicals; and if this discovery proves bona fide and genuine it will be a good thing not only for the owners of saw mills, but for the residents of places just big enough to have mills but not big enough to support ordinary gas works.—*Fenelon Falls Gazette.*

A Gigantic Mast.

A Naples correspondent writes:—A magnificent mast has been sent from Verona to the Agricultural Department of the Turin Exhibition. The tree grew in the woods of Cadore, and five other majestic pines had to be hewn down and cut to pieces before the one destined for the mast could be removed. When the lower branches had been cut off, this fine tree-trunk was divided into two pieces, the bottom part measuring more than 120 ft., and the top part, still adorned with its green branches, 18 ft. The weight of the tree, after being thus prepared, was 41 cwt. On examing the base it was found that that part was 205 years old, while the summit was only 63 years old. The mast was dragged from the forest to the station on two waggons, drawn by eight horses, and the whole of it took up seven railway trucks. Three days were employed in the transport by rail, as the special train could only travel by daylight, proceeded very slowly on account of the curves, and had to stop continually, not being able to pass another train. The mast is slender in comparison to its height, being 65 centimetres at the base and 15 at the summit. The stem preserves an equal width up to the height of about 90 ft., after which it diminishes rapidly. Including the expenses of transport, the mast will cost more than £50 sterling.

Preserving Wood.

Creosoted wood has been found less destructible by fire than the unprepared wood. Recently a building constructed of pine and spruce in their natural state, was burnt, and nothing was left but the sills, which were made of creosoted pine. They were charred, but they retained their form and a certain amount of strength. Another striking case was that of a derrick forty feet high with a forty-foot boom made of creosoted pine standing on an untreated pine base; the latter was burned to ashes, but the mast and boom, although charred all over, had forty-five feet of their length still good for futnre use. Creosoted wood can be easily extinguished with water when on fire.

Wood can also be preserved from decay by exhausting the air from the pores and filling them with a guttapercha solution. This process effectually preserves the wood from moisture, water and the action of the sun. The solution is made by mixing two-thirds of gutta-percha to one-third of paraffin. This mixture is then heated to liquify the gutta-percha, when it is readily introduced into the pores of the wood. The gutta-percha hardens in the pores when it becomes cool.

Building Inspectors.

Building inspectors are being appointed in every well regulated city in the United States, and Bay City has seen fit not to be dissimilar in this respect. A board of building inspectors was recently appointed by the city council, and hotels, business blocks and public buildings are being subjected to a rigid inspection. This is as it should be, because of the assurance it gives that the modes of egress in case of fire are sufficient, and that the building is safe in other respects.—*Lumberman's Gazette.*

To Make Wood Last.

A writer in a contemporary journal says: "I discovered, many years ago, that wood could be made to last longer than iron in the ground, but thought the process so simple that it was not well to make a stir about it. Posts of any wood can be prepared for less than two cents apiece. This is the recipe: Take boiled linseed oil and stir it in pulverised coal to the consistency of paint. Put a coat of this over the timber, and there is not a man that will live to see it rot."

Chips.

THREE years ago the lumber saw mills in Arkansas was 349, now it is asserted there are over $1,200.

ONE thousand shingles will cover one hundred square feet of surface, laid four inches to the weather; for the above, about five pounds of nails will be required.

THERE are 13,000,000 feet of logs, the property of the Winnipeg Lumbering Company, lying at Crookston, ready to be floated down the Red River. They will reach Winnipeg about the end of May.

DURING the months of February and March the exports of lumber and timber from Charleston, S. C., were reported as follows: Foreign—Valencia, 500,000 feet; St. John, N. B., 101,000; Bremen, 20,000. Coastwise—New York, 3,020,394; Boston, 250,000; Philadelphia, 560,000; Baltimore, 516,000; total 4,967,394.

PORT ARTHUR, the present Lake Superior terminus of the Canadian Pacific railroad, now has eight substantial docks, ranging from 400 to 1,000 feet in length. Among them is that of Watt, Moore & Van Dusen, a lumber firm, 475 feet long. On this dock is a shelter shed for lumber, which is cut at Lyon's Head, Georgian Bay.

IT has been decided to build the Hudson Bay Company's steam mills which were recently destroyed by fire, at Prince Albert. Men are already at work getting out the necessary timbers. New machinery will be ordered at once. It is the intention to have the mill, which will combine all modern improvements in running order by the 1st of September.

CALIFORNIA has a building boom in common with the other portions of the country. Never were indications for a grand building season more pronounced, says a San Francisco journal, than they are at the present time. Up to April 10 building and improvements to the value of $2,000,000 had been begun. This is greater than the entire amount expended in 1880.

C. VAUGHN, surveyor, of Selkirk, Man., has made the discovery of a quarry of very excellent building stone at Sawyer's bay, on the north shore of Lake Superior. The rock is very hard and can be worked with ease, and there are vast quantities in the neighborhood. Eastern owners propose to work the ledges. The quarry stone industry of Lake Superior is growing to great proportions.

THE Caldwell mill, at Charlton Place, near Ottawa, Canada, will begin operations immediately. It would remain idle were it not for the late decision in the McLaren-Caldwell case. The Caldwells had over 60,000 logs above Peter McLaren's improvements, which had been detained for two or three years, pending the final decision of the courts. Now the logs will be allowed to come down.

IN order to ascertain if logs could be floated or rafted from Pitt River, Shasta County, to the Bay City, says the San Francisco *Chronicle* of April 15th, a man named Dock Kennedy was sent out last Friday on a pine log to undertake the novel trip. The log was 24 feet in length and four feet in diameter. Kennedy was clad in water-proof clothing and supplied with plenty of food, which he carried in a knapsack. He made the trip, some 350 miles, on his roomy log in four days.

THE Winnipeg & Hudson's Bay Railway & Steamship Company has been formed, the object of which is set forth as follows: The bill creating this corporation authorizes it to build a standard gauge railway from Winnipeg or some other point at or near Selkirk, on the Red river, or on the line of the Canadian Pacific railway, west of the town of Selkirk, and east of Portage la Prairie, Manitoba, to Port Nelson, or some other point on the shores of Hudson's Bay, in the Keewatin territory, either in a continuous line, or by utilizing the navigable waters along or near the said route for the purpose of transport, and to own steam or other vessels for the purpose of transport from the terminus of the said railway to Europe or elsewhere, and to construct a branch to a point on the Canadian Pacific Railway, west of Lake Winnipegoosis, and also to build the railway in sections of 50 miles each.

How to Measure Trees.

Woods and Forests (English) says:—"Any person, however ill-informed, might easily get at the exact height of a tree when the sun shines, or during bright moonlight, by marking two lines on the ground, three feet apart, and then placing in the ground on the line nearest to the sun a stick that shall stand exactly three feet out of the soil. When the end of the shadow of the stick exactly touches the furthest line, then also the shadow of the tree will be exactly in length the same measurement as its height. Of course, in such a case, the sun will be at an exact angle of 45 degrees. Measurements of this character could be best effected in the summer, when the sun is powerful, has reached to a height in the heavens, and when the trees are clothed with living green so as to cast a dense shadow. To many to whom this idea may not have occurred, it might be made annually a matter of interest thus on warm summer days to take the height of prominent trees, and so to compare growth from year to year."

Railway Ties.

An exchange says:—Railway construction is bound to go on until it reaches a limit at which it ceases to be profitable. The consumption of ties will increase at a corresponding rate, while the question of future supply will become more serious and pressing as the cost increases and our native forests become thinned. It is pretty certain that wooden ties will not be discarded until our timber resources are far less abundant than they are now, or until some other material as cheap and as serviceable is substituted for wood. It is not likely, however, that any such material will be found, but it is more than probable that the durable properties of the wood, especially the soft and porous kind that is not now available for ties, will in time be very much increased by some of the preservative methods that have already proved very effective so far as they have been tried. But these methods are not likely to be used very extensively in this country until the cost of ordinary ties is considerably more than it is now.

The Angry Tree.

A specimen of the angry tree, indigenous to Australia, is growing upon a farm in Nevada, and is now eight feet high. When the sun sets its leaves fold together, and the ends of the tender twigs coil up like a pigtail. If the twigs are handled the leaves move uneasily for a minute or more. A singular thing concerning the tree was its apparent resentment on being removed from a pot in which it had matured into a much larger pot. Hardly had it been placed in its new quarters before the leaves began to stand up in all directions, like the hair on the tail of an angry cat, and soon the whole plant was in quiver. At the same time it gave out an odor most pungent and sickening, resembling the odor given off by rattlesnakes and other kinds of snakes when tasted. So strong and offensive was the smell that it had to be removed from the house for several days.

Alleged Destruction of a Plantation.

A large number of trees on the Mount Gabriel plantation, near Schull, in the county of Cork, have recently been discovered hewn to the ground. The plantation is owned by the Rev. Thomas Nash Hicks, of Torquay, who has also considerable other property in the district, the agent being Mr. Downes, solicitor, of Skibbereen. About three years ago, when Mr. Hicks brought ejectment processes against some of his tenants, the same plantation was set on fire and the underwood destroyed. A heavy claim for compensation has been lodged against the district.

The "Great Eastern."

Arrangements are in progress to begin work upon this vessel very shortly to fit her for her new career of usefulness in Gibraltar Bay as a coal hulk. Permission for her anchorage has been obtained from the Colonial office. The project is viewed also with favor by the admiralty, as the Great Eastern will effect a great improvement in the bay, by dispensing with the multitude of small coal hulks which now encumber the harbor.

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Market Reports.

MONTREAL.

From Our Own Correspondent.

MAY 9.—As usual at the beginning of this month trade has been pretty lively, prices are holding out, and we can make no change in our quotations, but as new lath are coming in and stocks getting more plentiful we have reduced prices to two dollars. Large quantities of lumber is shipping from Ottawa and dry lumber is hard to obtain, and lots are readily picked up at full prices. We quote prices as follows ex yard :

Pine, 1st quality, ℔ M	$35 00@40 00
P ne, 2nd " ℔ M	22 00@24 00
Pine, shipping culls, ℔ M	14 00@16 00
Pine, 4th quality deals, ℔ M	11 00@12 00
Pine, mill culls, ℔ M	10 00@12 00
Spruce, ℔ M	10 00@13 00
Hemlock, ℔ M	9 00@10 00
Ash, run of log culls out, ℔ M	20 00@25 00
Bass, " " ℔ M	17 00@20 00
Oak, ℔ M	40 00@50 00
Walnut ℔ M	60 00 100 00
Cherry, ℔ M	60 00@80 00
Butternut, ℔ M	35 00@40 00
Birch, ℔ M	20 00@25 00
Hard Maple, ℔ M	25 00@30 00
Lath, ℔ M	2 00@ 0 00
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 50@ 0 00

CORDWOOD.

Cordwood is coming in pretty freely and there is plenty on the wharves, and imports both by boats and G. T. R. are large, prospects are good for a full supply, prices, however, are firm as under, but the demand is slow. We quote ex cartage at the wharves as follows :

Long Maple	$ 7 00
Long Birch	7 00
Long Beech	6 50
Tamarack	5 50

SHIPPING.

Although the shipping trade has commenced we have not much animation to report, but shipping lumber is arriving freely and engagements by steamship have been made for Liverpool at 50s. per M. Of course there is nothing done as yet for South America.

TORONTO.

From Our Own Correspondent

MAY 10.—Sales by car load and from the yards continue brisk although it is doubtful if any of the dealers are making much money, as there is far too much cutting in prices to warrant any great amount of profits ; retail dealers cannot draw to their yards, sort up, and pile, and then deliver out again for less than $2.50 per M., especially when they have to provide against more or less bad debts, whereas their margin for all this labor and risks is in many cases not more than $1.50 per M. Such profits will not pay, and the weaker ones must ultimately go the wall. It is the same to a greater or lesser extent with the wholesale men. One firm in this city doing the largest business now being done here, are cutting on prices at a fearful rate, it may be that they have bought cheaper than other dealers, certain it is that other dealers cannot sell at the prices quoted by them without coming out behind. It is the old story over again, no concerted action between lumbermen, but each one going his own gait, and some dealers seem to act at though it was much better to dispose of 2,000,000 feet and make only $1,000 than to handle 1,000,000 feet and make the same sum. Well, all I have to say in the matter is such men ought to have all such trade until they have their fill.

There has been considerable lumber shipped over the dock since my last letter, something like 4,000,000 feet, mostly for Oswego, has been sent away during the last two weeks, and several vessels are now at the docks loading.

Your readers will, doubtless, have noticed through the daily papers that Mr. Robt. Kerr has accepted a position as freight agent on the Canada Pacific railroad, and will leave here for Winnipeg about the 1st of June. There will be any amount of dry eyes amongst the lumbermen here, and, by a parity of reasoning, correspondingly wet ones at Winnipeg. Although it is only fair to that gentleman to say that no matter who takes his position here, it will be difficult for him to give satisfaction while the road is under its present management, with a legal man at the helm and a board composed mostly of merchants, either retired or at present in business, and the road depending on the lumber traffic for its earnings, what can such men know of the lumberman's requirements.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
Scantling and joist, up to 16 ft	13 50
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 00
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	20 00
" " " 32 ft	21 00
" " " 34 ft	22 50@22 50
" " " 36 ft	24 00
" " " 38 ft	27 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	24 00
" boards "	20 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 00
Three uppers, Am. inspection	35 00@40 00

B. M.

1½-inch flooring, dressed	30 00
1½ " " rough	16 00
1¼ " " dressed	25 00
1¼ " " undressed	15 00@15 00
1 " " dressed	22 00
1 " " undressed	16 00
⅝ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	2 90
Sawn Lath	2 75

WINNIPEG.

The Winnipeg *Commercial* of May 6th says : This business is in anything but a satisfactory state at present. While the demand for goods is steadily on the increase, and a fair season's trade may be expected, a safe basis of doing business may not be reached during the summer. So many of our large lumber concerns are in straightened circumstances, and under compulsion to realize during the present year that prices are cut pretty much as the eagerness for money dictates. To reach reliable quotations it is feared will be impossible during the summer, as slaughtering seems to be the rule, and this is made worse by the fact that American manufacturers are also prepared to deluge this market with goods at ruinously low prices.

Pine lumber, 1st, common boards, dressed	$26 50
do, 2nd, dressed	25 50
do, 1st dressed rough	26 50
do, 2nd do.	25 50
Sheating, rough	25 00
Timber 16 feet and under	24 00
do. over 16 feet, for each additional 2 feet.	1 00
Dimension and joists 16 feet and under	24 00
do. do, over 16 feet for each	1 00
Fencing	25 00
2 and 3 in. battens	30 00
A. stock boards, all widths	50 00
B. do. do.	45 00
C. do. do.	40 00
D. do. do.	35 00
1st clear, 1, 1½, 1½, and 2 inch	60 00
2nd do. do. do.	56 00
Window and door casings	50 00
Base boards, dressed	50 00
1st pine flooring, siding and ceiling	40 00
2nd do. do. do.	35 00
3rd do. do. do.	30 00
½ inch split siding, dressed	30 00
Spruce lumber—timber 16 feet and under	22 00
do. over 16 feet for each additional 2 feet	1 00
Dimension and joists, 16 feet and under	23 00
do do. over 16 feet, for each additional 2 feet	1 00
Boards	22 00
1st flooring, siding and ceiling,	28 00
XX shingles	5 25
Star A shingles	5 25
X shingles	5 00
A. do.	4 50
Lath	4 50

CHICAGO.

The *Northwestern Lumberman* of May 10, says :—The port list for the week ended Wednesday showed 198 arrivals of lumber and shingles. For the weeks ended May 5 and May 12 last year the arrivals numbered 70 and 124 respectively. So it will be seen that the current arrivals this year are considerably in excess of those of a corresponding time last year. In one respect, also, there is a difference between the two springs in the nature of receipts.

This year lumber is being bought more freely at the mills, and it is nearly all dry. Such lumber does not stop at the docks, but is passing up the branches in large volume, to the yards. Last year this feature though somewhat prevalent, was less marked than now. The north side yards last spring absorbed relatively more of the early cargoes than they are now taking, though they are receiving their proper share. The greater cry this spring from the Twenty-second street yards is for dry lumber, and it is mostly purchased either over the lake at the mills, or of the commission men here to arrive. Some green lumber comes to the docks as a test of the market, but it drags heavily. Indifferent cargoes of piece stuff, boards and strips are neglected. Buyers want a square deal on dry lumber mostly, for instant hardling ; they will attend to green lumber later on.

Nearly every day this week there has been a good fleet of cargoes at the docks, the majority of which has been shingles and green piece stuff. Scattering cargoes of mixed dimension boards and strips, and others altogether inch lumber or dimension, some dry and some green, have also been offered and worked off. The market has been considered fairly active on all but shingles, though transactions in lumber to arrive take the lead, and they call for dry stock.

Receipts of lumber, shingles, etc., for week ending May 8, as reported by the Lumberman's Exchange :—

	RECEIPTS. *Lumber.*	*Shingles.*
1884	57,133,000	32,349,000
1883	38,741,000	19,502,000

FROM JANUARY 1, 1884, TO MAY 8, 1884, INCLUSIVE.

	RECEIPTS. *Lumber.*	*Shingles.*
1884	198,423,000	82,254,000
1883	118,017,000	102,951,000
Increase	80,406,000	
Decrease		20,697,000

STOCK ON HAND APRIL. 1.

	1884.	1883.	1882.
Lumber	370,461,916	412,007,038	279,324,096
Shingles	270,041,250	147,063,179	115,263,625
Lath	38,582,546	43,686,338	20,518,306
Pickets	1,169,586	3,497,232	3,802,011
Cedar posts	221,223	113,842	145,335

ALBANY.

Quotations at the yards are as follows :—

Pine, clear, ℔ M	$53 00@58 00
Pine, fourths	53 00@58 00
Pine, selects	53 00@58 00
Pine, good box	22 00@33 00
Pine, 10-in. plank, each	00 42@00 46
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 21
Pine, 10-in. boards, 16 ft., ℔ M	28 00@32 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	16 00@18 00
Pine, 1-in. siding, select	43 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@85 00
Cherry, common, ℔ M	25 00@35 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	38 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 4 75
" clear, "	0 00@ 3 25
" cedar, mixed	0 00@ 3 50
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ℔ M	0 00@ 2 75
Lath, spruce, "	0 00@ 3 00

OSWEGO, N. Y.

From Our Own Correspondent.

Prices remain steady, receipts have been very light since the opening and trade very dull.

Three uppers	$44 00@45 00
Pickings	34 00@35 00
Fine, common	20 00@24 00
Common	13 00@16 00
Culls	10 00@13 00
Mill run lots	14 00@18 00
Sidings, selected, 1 inch	30 00@35 00
1¼ inch	30 00@36 00
Mill run, 1x10, 12 inch	17 00@19 00
selected	22 00@26 00
Shippers	13 00@16 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@12 00
1x6 selected for clapboards	22 00@35 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 00@ 3 50
XX pine shingles	2 30@ 2 50
Lath	2 00@ 2 25

BOSTON.

Cotton, Wool and Iron of May 19, says :—The inquiry is quite fair and is improving, but the weather is still a repressing element in the market. The amount of building is to be large this season, but it does not open up as rapidly as with milder weather. Desirable lumber is not in excessive supply here, but of trashy calls there is a superabundance.

Orders for pine are coming in only moderately as yet. Yellow pine continues to move slowly at low prices. Orders for spruce can be taken, but it is almost impossible to place them, as many of the mills are shut down. As to hardwoods, good walnut sells freely at firm prices. Whitewood is selling quite well. Cherry is in steady request. Wide ash boards are in good demand. Considerable also has been doing in oak.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

TONAWANDA.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

BUFFALO.

We quote cargo lots :—

Uppers	$46 00@48 00
Common	18 00@25 00
Culls	12 00@14 00

TYNE.

The *Timber Trades Journal* of April 26th, says :—The arrivals of the past seven days have been only small, and consist mainly of pit-props in bulk. Amongst the list will be noticed one cargo of timber from Danzig, one cargo Memel deals, and a cargo from Oxelosund, together with three steamer cargoes from Norway and Gothenburg, with assorted cargoes deals, planed boards, and pitwood. With the early opening of the navigation from the Baltic it will not be long before several ships from the lower ports and steamers from Sundswall and adjacent ports will be due.

Stocks of deals here are very low, more especially of the higher qualities, of which there is an absolute scarcity.

The stocks of American goods and pitwood are still very high and prices stationary. In all descriptions of wood goods the demand is but feeble, and the outlook for the season is not at all bright or cheerful.

As a rule saw-mills are fairly well employed except those on the river, principally employed in the shipbuilding trade, and these are at the moment doing little or nothing.

LONDON.

The *Timber Trades Journal* of April 26 says :—The bright dry weather of which we are experiencing such a lengthened spell, though cold, is very suitable for outdoor work, and building operations must be tolerably active just now in consequence ; so that we may look for some stir in the trade pretty soon. The absence of heavy unreserved sales of timber, &c., at the "Baltic," also should come to the assistance of the market, and might be expected to afford the dealers, who are now the principal holders of stock here, a fair chance of selling their stuff at somewhat better prices.

The long-expected advance in values, which we have been looking from day to day to manifest itself at the public sales, has not arrived yet apparently, as we could trace no marked symptoms of that nature at the sale this week, and we fear if the improvement does not show itself before long, the fresh arrived goods, now soon to come forward, will make the upward movement still less likely.

Freights still seem going further to the bad, and the 22s. we have recently recorded from the Swedish lower ports is not so readily forthcoming as it was, and it is anticipated that the 20s. which charterers are said to be offering will have to be accepted, so plentiful are steamers now in the market.

In fact, it appears as if tonnage rates will eventually have no recognized scale to go by, and it will just be, get what you can.

The Shipping Bill of the President of the Board of Trade—which by the by, is very unlikely to become law—will have had one good, viz , in stopping shipbuilding, and thus preventing the immense overgrowth of tonnage in the market which has been going on continuously for several years past, and to which in a great measure the wretchedly low freights of the last year or so are entirely attributable.

At present the chances are against making a profitable voyage, but not all vessels will lose money at the present low rate of remuneration. A small freight will sometimes pay with a fortunate run and no accident.

Steamers were shy of the deal trade for a long time, but now appear to prefer it to any other freight. It is loaded and discharged quickly, that is one advantage, and it is also a very clean cargo, which is another recommendation in its favor.

The present year to those who charter early will have been one of the most favorable in respect to the cost goods will stand them in on this side, and the fact of tonnage being so low from the White Sea will create quite a revolution in the prices of deals from that direction, especially of the commoner sorts, and may be expected to bring such goods more into direct competition with the Swedish and Russian deals of similar class.

LIVERPOOL.

The *Timber Trades Journal* of April 26, says: Business continues very quiet in the country, and complaints are still made of the want of life and animation in the manufacturing districts. In spite of these reports there is, however, a fair amount of stuff going into consumption, but the prices are all in favor of the consumer.

The import is still light especially in spruce deals; the demand, however is correspondingly small, and little impression is made upon the stocks, which are too heavy, seeing that with the present low rates of freight and the quantity of steam tonnage available we may have an increased import at any moment.

Freights continue very low, especially in the pitch pine ports, where we hear vessels have been chartered at 32s. per load, Pensacola to Liverpool. From Quebec to this port freights have been engaged at 24s. per load, which are now the current rates.

The announcement is made that the old firm of Henry Sharples, Son, &Co. has been dissolved and reconstructed by Mr. William and Mr. John Sharples, who will carry on the business at Quebec, under the style of W. & J. Sharples.

TIMBER SALES.

On April 25th Messrs. Farnworth & Jardine sold part of the cargo per Mermaid, from Quebec, which vessel was wrecked on the coast during the past winter. A portion of the cargo was salved and brought on here, and this was sold without reserve, on account of whom it may concern. The timber being in fair condition sold at what may be considered good prices.

Quebec waney board pine—		
14 to 18 ft. by 25 to 29 in.	24d.	per ft.
14 " 18 " " 25 " 28 "	22d.	"
12 " 20 " " 21 " 28 "	20d.	"
13 " 37 " " 20 " 24 "	19d.	"
15 " 24 " " 25 " 29 "	22d.	"
14 " 25 " " 26 " 29 "	28d.	"
12 " 29 " " 22 " 29 "	27d.	"
12 " 27 " " 20 " 24 "	24d.	"
13 " 32 " " 25 " 29 "	25d.	"
13 " 27 " " 16 " 21 "	21d.	"
15 " 23 " " 20 " 24 "	23d.	"
12 " 29 " " 20 " 24 "	19d.	"
13 " 24 " " 25 " 29 "	23d.	"
13 " 25 " " 20 " 28 "	22d.	"
13 " 24 " " 18 " 21 "	21d.	"
Square timber AA mark—		
28 to 48 ft. 16 to 19 in.	29d.	"
28 " 41 " 15 to 17 "	27d.	"
18 " 48 " 14 " 15 "	28½d.	"
25 " 44 " 13 " 15 "	25d.	"
24 " 44 " 13 " 15 "	23d.	"
No mark—		
15 to 48 ft. 10 to 25 in.	15d.	"
Red pine—		
19 to 27 ft. 10 to 14 "	13½d.	"
Oak—		
26 to 48 ft. 12 to 22 in.	30d.	"
Pine deals, 2nd quality—		
9 to 13 ft. 3×7 to 21 in.	£14 10s.	per std.
Pine deals, 4th quality—		
9 to 16 ft. 3×7 to 19 in.	£5 15s.	"
Spruce deals, 1st quality—		
9 to 14 ft. 2×7 to 11 in.	£7 10s.	"
Spruce deals, 2nd quality—		
9 to 16 ft. 2×7 to 11 in.	£5 15s.	"
Spruce deals, 3rd quality—		
9 to 16 ft 2×6 to 11 in.	£4 15s.	"
Pine deal ends, 4th quality—		
6 to 8 ft. 3×11 in.	£5 10s.	"

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent Office, April 29, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., N. W., Washington, D. C.:—

297,925.—Box-making machine—J. S. Gibbs, Bridgeport, Conn., assignor to U. S. Box-Machine Co., New York, N. Y.

297,884.—Lathe dog—O. D. Warfield, Chicopee Falls, Mass., assignor to C. H. Wood, Province, R. I., & E. E. Holton, Chicopee Falls.

297,635.—Lathe, Turning—J. B. Romans, Nashville, Tenn.

297,567.—Lubricator—M. S. Cabell, Quincy, Ill.

297,616.—Lubricator—M. McMullin, Denver, Col.

297,622.—Lubricator—T. Nel, Paris, France.

297,595.—Mechanical power—W. S. Gray, May, Texas.

297,816.—Saw—J. Ledward, Westerly, R. I.

297,841.—Saw, drag—J. R. Payne, Freedom, Ind.

297,558.—Saw-frame, drag—M. Beck & A. McRorey, Excelsior Springs, Mo.

297,566.—Saw sharpening machine—L. Bush, jr., Assignor to American Machinery Co. Chicago, Ill.

297,698.—Saw-swage.—S. Kinney, San Francisco, Cal.

297,559.—Saw-swaging device—B. F. Bridges, Big Rapids, Mich.

297,766.—Saw-tooth, insertible diamond—E. Foerester, New York, N. Y.

297,568.—Wood, composition for staining and preserving—S. Cabot, jr., Boston, Mass.

PATENTS ISSUED MAY 6.

298,207.—Bearing for shafts, etc.—S. J. Howell, Melrose, Mass.

298,120.—Belt fastener—J. A. Roberts, assignor of one-half to W. M. Dwight, Detroit, Mich.

297,291.—Belt gearing for machinery—J. H. Cromic, assignor to M. A. & C. A. Furbush, Philadelphia, Pa.

298,238.—Belt-holder, machine—W. R. Satley, Wellington, Ohio.

298,015.—Chuck, lathe—W. A. Montgomery, Cleveland, Ohio.

298,300.—Flooring—D. Ham, Iowa City, Iowa.

297,967.—Lathe rest—S. H. Brown, Rampo, N. Y.

298,269.—Planing machines, tool oscillating device for—J. Angus Lambeth, county of Surrey, England.

298,115.—Saw—H. W. Peace, assignor to H. W. Peace Co., Brooklyn, N. Y.

298,293,—Saw guard—W. H. Dalby, assignor of three-fourths to A. Medsker and C. E. Clark, Indianapolis, Ind.

10,474.—Saw-mill circular (reissue).—W. J. F. Liddell, Charlotte, N. C.

298,195.—Saw mill feed mechanism—E. T. Gardner, assignor of one-half to J. H. Odom, Rocky Mount, N. C.

298,225.—Vice, bench—W. H. Northall, assignor to C. S. Leet, Bridgeport, Conn.

BUCKHORN.

From Our Own Correspondent.

THE LOCKS.—Mr. Goodwin is pushing ahead with the construction of the locks here. They commenced last week to lay the sills. In or about six months there will be a marked difference in the looks of things. To push ahead is his motto.

SAW MILL.—Mr. W. H. Hall is having great improvements made in his saw mill, by getting it overhauled from the very foundation. He has placed in it a Ballkan Turbine wheel manufactured at Port Perry, and a large circular saw. This mill has been in decay for years. Since the Trent Valley Canal has commenced it has made things lively in this mill, and, in fact, has done good to the whole village. There is not an empty house to be seen and everyone is prospering.

TO SAW TOUGH LUMBER.

All tough timber, when the logs are being sawed into lumber of any kind, whether scantling, boards or planks, will spring badly when a log is sawed in the usual manner, by commencing on one side and working toward the other. In order to avoid this it is only necessary to saw off a slab or plank, alternately, from each side, finishing in the middle of the log. We will suppose, for example, that a log of tough timber is to be sawn into timber of a uniform size. Let the sawing be done by working from one side of the log toward the other, and the ends of the scantling will all be of the desired size, while at the middle some of them will measure one inch broader than at the ends. After the log has been spotted, saw off a slab from one side; then move the log over and cut a similar slab from the opposite side. Let calculations be made by measuring before the second is cut off, so that there be just so many cuts, no more and no less, allowing for the kerf of every cut. If the log is to be cut into three-inch scantling, for example, saw a three-inch plank from each side, until there is a piece six and a quarter inches left at the middle. The kerf of the saw will remove about one-fourth of an inch. When a timber log is sawed in this way, the cuts will be of a uniform thickness from end to end. Now turn the log down and saw the cuts the other way in the same manner, and the scantling will not only be straight but of a uniform size from end to the other, if the saw be started correctly,—*Sine's Lumberman's Form Book.*

Model Work and Pay.

In the recently published report of the Ontario Agricultural College and Experimental Farm, there is an item of $4,000.42 paid for students' wages. This is an equivalent of 20 first-class farm labourers, counting wages at $200 a year. Add to this the 10 regular farm and garden hands, who, let us suppose, are first class men getting $200 a year—$2,000. Thereto should also be added the wages of the foreman of the farm, garden and mechanical departments, as required by the estimates for 1884, $1,000 each—$3,000, and also the wages of superintendence, say $1,000. This makes a gross total of $10,000 paid out for the ordinary work of these departments. This sum is equivalent to 50 men at $200 a year, or about 10 hands for every 100 acres of the farm. If men can be hired for $180 a year, the number would be 55 in place of 50. This does not include extra help in summer, or labor expended on experiments or in the arboretum. However, let us credit a few hundred (or a few thousand?) dollars for instruction by the foremen, and for any extra fancy work not usually performed by the ordinary farmer. It is also necessary to bear in mind that the facilities enjoyed by the Farm in the way of water privileges and agricultural implements and machinery are far superior to those of the average farmer.

The profits on the $25,000 voted by Government for a fresh importation of live stock will be inadequate to maintain this equipage and keep up the reputation of the Farm. How would it do for the farmers to invite the management to make the best use of the means they have before they get any more?—*Farmers' Advocate.*

J. S. MAYO

IMPORTER AND MANUFACTURER OF

MACHINE OILS

OF EVERY DESCRIPTION.

9 Common Street, Montreal.

AMERICAN LUBRICATING OILS A SPECIALTY.

As I carry the LARGEST and BEST assorted Stock of OILS in the Dominion, I am prepared to fill all orders Promptly and at

LOWEST MARKET PRICES.

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As paying as any agency in the world. For particulars, full and free, address H. G. TUNISON, 388 Richmond St. LONDON, ONT.

AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest, best book ever sold for less than twice our price. The fastest selling book in America, Immense profits to agents. All intelligent people Tant it. Any one can become a successful agent terms free. HALLETT BOOK CO., Portland Maine.



GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Augusta, Maine.

Burdock BLOOD BITTERS.

WILL CURE OR RELIEVE.

BILIOUSNESS, DYSPEPSIA, INDIGESTION, JAUNDICE, ERYSIPELAS, SALT RHEUM, HEARTBURN, HEADACHE, DIZZINESS, DROPSY, FLUTTERING OF THE HEART, ACIDITY OF THE STOMACH, DRYNESS OF THE SKIN,

And every species of diseases arising from disordered LIVER, KIDNEYS, STOMACH, BOWELS OR BLOOD.

T. MILBURN & CO., Proprietors, Toronto.

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MANUFACTURER OF AND DEALER IN

Tarred Felt, Roofing Pitch, Sheathing and Building Papers, Carpet and Rosined Waterproof Paper, Ready Roofing, &c. ☞All orders promptly attended to at LOW PRICES.

H. WILLIAMS,
4 Adelaide Street East, Toronto.

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Lumber Drivers' Calks

TEMPERED IN OIL.

25 BALL and 5 HEEL to Set

The Calks are now used by all the principal Drivers in Maine and New Brunswick.

Kept by Dealers in Lumbermen's Supplies

FOR SALE BY

T. McAVITY & SONS

Dealers in Lumber and Mill Supplies,

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Samples sent by mail on application.

EAGLE FOUNDRY!

GEORGE BRUSH

14 to 34 King and Queen Sts, MONTREAL,

MAKER OF

Steam Engines, Steam Boilers, Hoisting Engines, Steam Pumps,

CIRCULAR SAW MILLS, BARK MILLS, SHINGLE MILLS,

Water Wheels, Mill Gearing, Shafting, Hangers and Pullies,

Hand and Power Hoists for Warehouses &c., &c.

Also, Sole Manufacturer of BLAKE'S CHALLENGE STONE BREAKER.

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"Water's" Perfect Steam Engine Governor, and "Heald & Sisco's" Centrifugal Pumps

EXTRA HEAVY AMERICAN

Oak Tanned Leather Belting.

RUBBER BELTING, RUBBER PACKING, RUBBER HOSE, LINEN HOSE and COTTON HOSE.

☞A Full and Complete Stock always kept on hand. ☞WRITE FOR PRICES and DISCOUNTS.

We have the Largest and best equipped RUBBER FACTORY in the world for the manufacture of VULCANIZED INDIA RUBBER GOODS for Mechanical Purposes.

Our trade here has increased to such an enormous extent that in order to keep up with the demands, we have purchased from Major John Gray, M.P.P., Parkdale, the plot of ground situated on West Lodge Avenue, adjoining the Credit Valley, Toronto, Grey and Bruce, Northern and Grand Trunk Railways, for the erection thereon of a BRANCH RUBBER FACTORY, works to be in full operation January 1st, 1884.

THE GUTTA PERCHA AND RUBBER MANUFACTURING CO.

T. McILROY JR.

WAREHOUSE:—10 and 12 King Street East,

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32 First Prizes AND 6 MEDALS.



AT HALIFAX AND TORONTO, *1883.*

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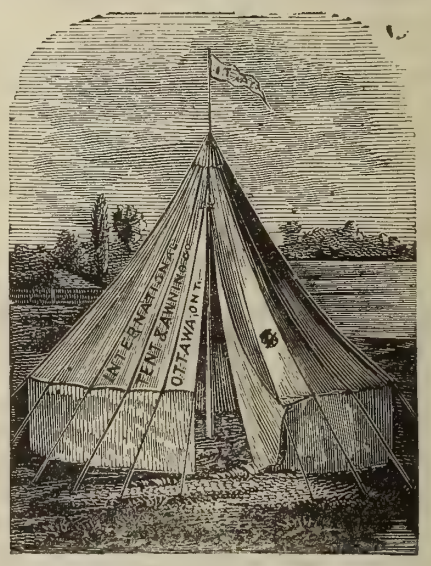
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Estimates for Circus Tents, Range Marquees, Hand-made Sails, etc., furnished on application. Liberal Discount to Large Buyers.

PORTABLE CANVAS BOATS MADE TO ORDER

SEE OUR NOVELTIES IN **Camp Furniture!**



Send for CATALOGUE AND PRICE LIST!

At Toronto, Ont., and St. John, N.B., we made the best Display of Tents ever shown in Canada—and we never substitute an article inferior to sample in filling orders.

We control "THE LATOUR PAT." for Camp Furniture, the best on earth. The only Gold Medal ever given for this class of goods was awarded to the Latour Camp Furniture at Toronto in 1882.

SAIL-MAKING.

We have secured the services of the best practical sail-maker in Canada. Orders in this line will receive prompt and satisfactory attention, as is usual with all orders entrusted to us.

Agency for the WILDERMUTH BED SPRING, the best in the Market.

A. G. FORGIE, MANAGER,

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184 SPARKS STREET, OTTAWA.

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The William Hamilton Manufacturing Company, Limited

MANUFACTURERS OF

SAW MILL AND GENERAL MACHINERY.

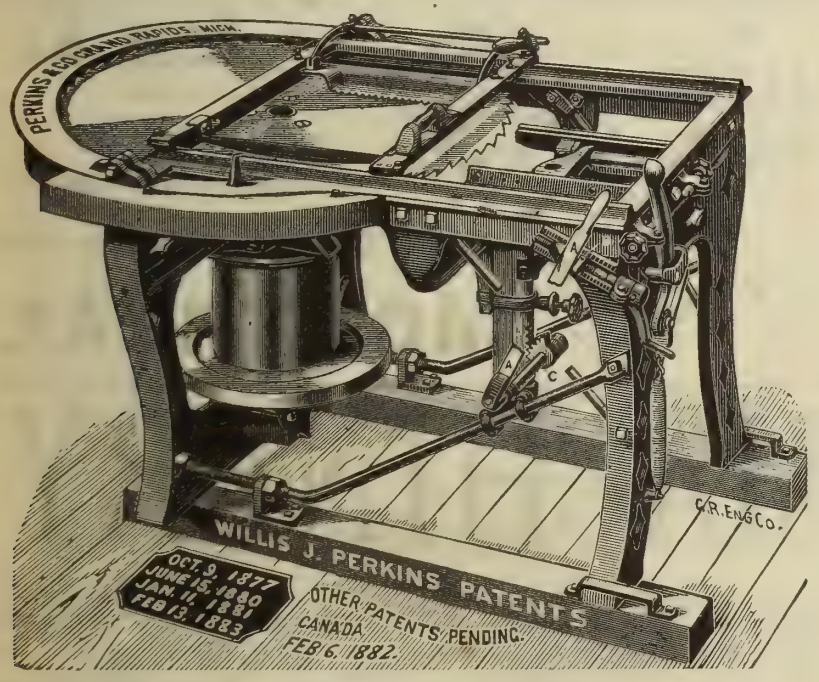
OUR SAW MILL ENGINES are made Strong, Neat and Durable, knowing well the ever varying Strain they are subjected to in driving a Saw Mill.

We wish to call the attention of our Canadian Lumbermen to our First Class HEAVY SAW MILL MACHINERY for Circular Mills and Circular and Gang Mills of the most improved designs. We are prepared to submit Plans and Specifications, together with any information that our many years of close application to the Saw Mill Business may have suggested to us, also when required to enter into contract for building and supplying the machinery complete, superintending the starting of the same, and handing over the mill to its owner in first-class running order.

Besides the variety of Machines we build for the manufacture of lumber we have added to our list the

PERKIN'S PATENT SHINGLE MACHINE.

aving obtained the sole right to manufacture and sell for the ominion. Also Drag Saws, Bolters, Sappers, Jointers and Packers.



GRAND TRIUMPH.

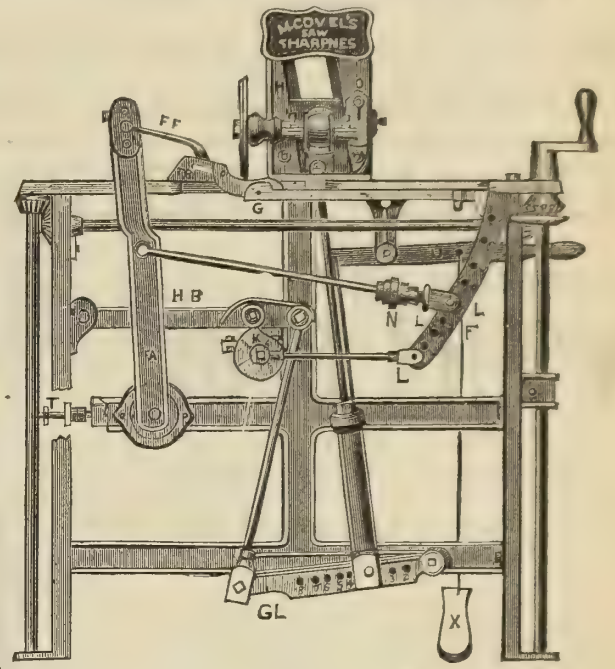
Willis J. Perkins' Drop Tilt !

The only Horizontal Saw Machine on which a thick slab can be cut from the bolt.

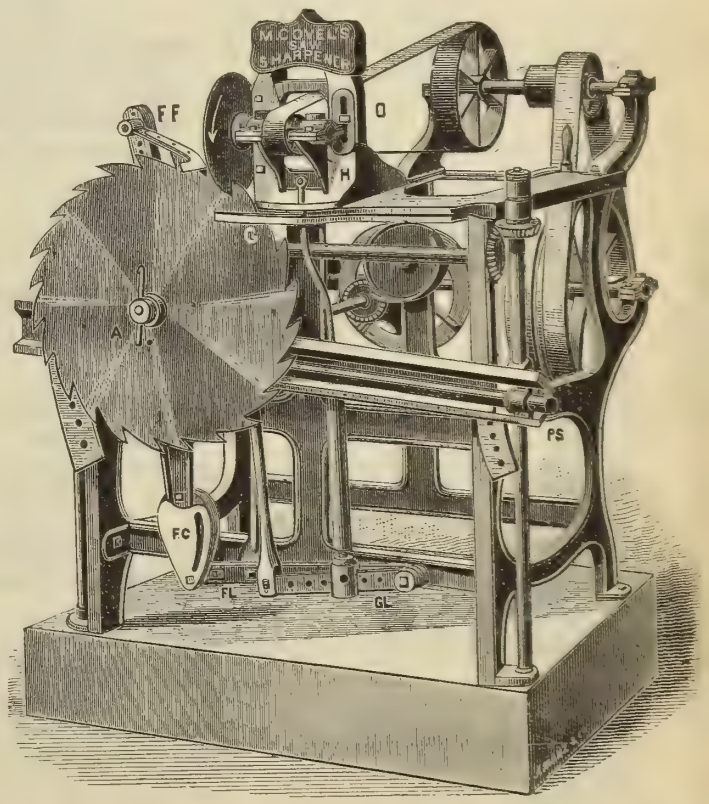
☞ *SECOND CUT ALWAYS A SHINGLE.*

Knots, rots, hearts, bolt squared rift-ways, and all irregularities cut off at one clip. This improvement will pay the price of the whole machine every season by increase of quality and quantity cut.

THE M. COVEL PATENT SAW SHARPENER.



The above Cut No. 1 shows some very important changes that have lately been made, which makes the machines far less complicated for new beginners to operate. Cut No. 2 shows this machine with a circular saw upon it ready for operation.



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SOLE MANUFACTURERS AND AGENTS FOR THE DOMINION.

Send Stamp for Catalogue and Price List.

The Improved CLIMAX Sash Lock

MANUFACTURED BY MILLER BROS., GUELPH.

Holds the sash in any position so that it cannot be moved either up or down, can be put on by anyone, only requiring two screws.

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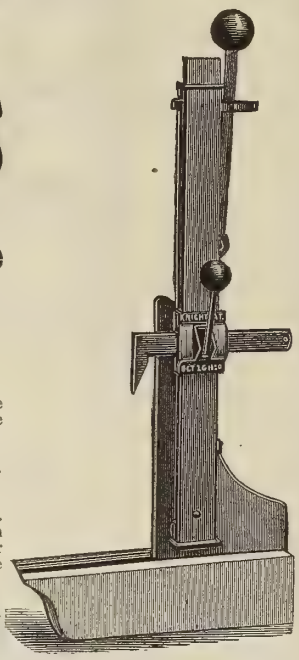
MANUFACTURER OF

KNIGHT'S PATENT "EXCELSIOR"

SAW MILL DOGS

The Sawyer's Favorite

For Holding Logs upon a Saw Mill Carriage while being Sawn into Lumber.



EXCELSIOR DOG.

MISSISSIPPI, June 7th, 1883.

HUGH GIBSON, ESQ.,—Your Patent Excelsior Mill Dogs give entire satisfaction, and is certainly up to your recommendation. They are the best Mill Dog in the market. I am very much pleased with them.

Yours Respectfully,
PETER McLAREN.

BERKLEY, April 20th, 1883.

HUGH GIBSON,—SIR,—The Dogs I bought of you give satisfaction. They beat any Dog that I ever saw for ripping or edging lumber on carriages. They are just the thing for scantling. I would not take $50 for them to-day and have to wait for another pair to come from you, because I believe they make two dollars a day for me.

Yours truly,
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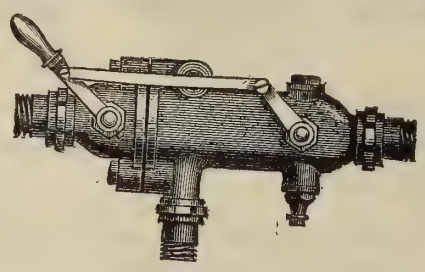
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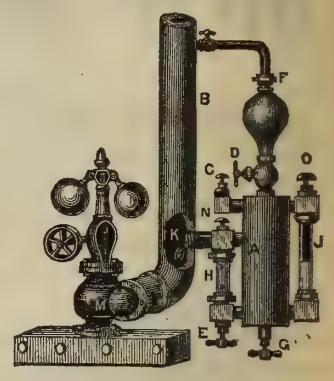
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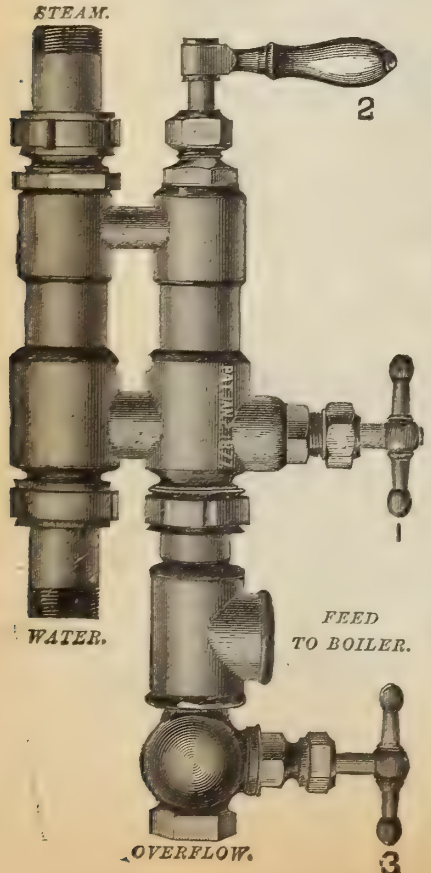
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☞TO ADVERTISERS.

It has a circulation among saw mill owners, manufacturers, lumber and timber dealers and all classes connected with the timber business.

Examine the field, count the cost, and you will at once decide that the CANADA LUMBERMAN is the

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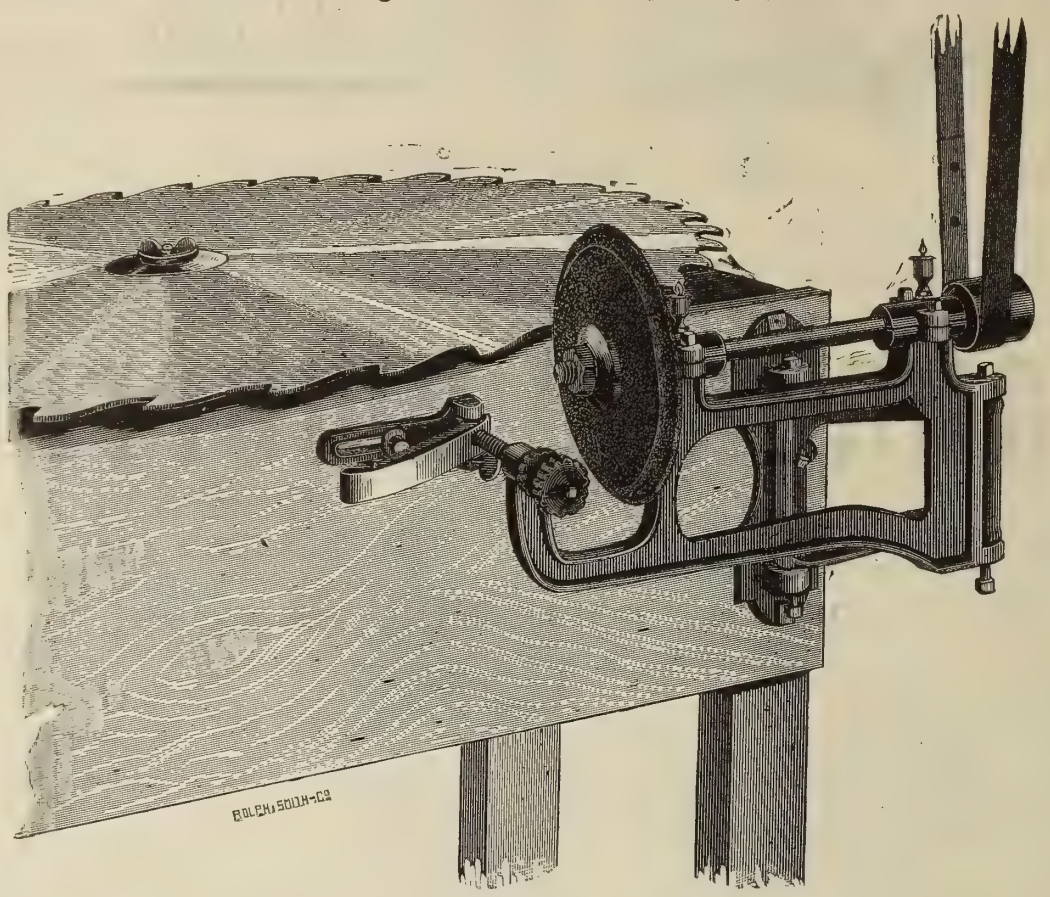
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Lumbering Season, 1884

Saw Mill Owners in providing for the season of 1884, ought not to lose sight of ROGERS' SAW GUMMER for it will save them more money in proportion to the amount invested than any other machine.

Only $30, including Emery Wheel; Table and Countershaft, $10 extra.

A few of ROGERS' SAW GUMMERS were put on the market last season, and we quote some of the commendations received:

JAS. HADDEN, Foxmead, says:—
"Your machine is all I expected."

CHAS. ANDERSON, Anton Mills, says:—
"I have given it a good trial, and am well pleased with it. "I find it is one of the indispensables in a saw mill." * *

ROBT. R. WEIR, Orillia, writes:—
"It works like a charm, and is very accurate in its work."

CRONE & PATTON, Hoc Roc Mills, Gravenhurst, says:
"The Rogers' Saw Gummer purchased from you gives "good satisfaction, * * it cannot be beat."

D, DAVIDSON, Pentanguishene, writes:—
"We are well pleased with the Gummer."

W. W. BELDING, Wyevale, writes:—
"I have the Gummer running and it is giving good "satisfaction."

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THE CANADA LUMBERMAN

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PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM

VOL. 4. PETERBOROUGH, ONT., JUNE 2, 1884. NO. 11.

OTTAWA NOTES.

The Pembroke *Observer* says:—Mr. John Sullivan of Westmeath, brought down from Chalk river a small raft of square timber which he manufactured this past winter. He sold to Mr. Richard White.

Mr. W. B. McAllister has sold his two years' cut of logs, dimension and waney timber, to Messrs. Perley & Pattee and Mr. James McLaren, of Ottawa. This sale foots up the handsome sum of $76,000. Mr. McAllister retains sufficient logs to fulfil all sawn lumber contracts he has made. Mr. McAllister has a quantity of dimension timber coming over the slide at Pembroke. Men are actively engaged in rafting it up, preparatory to taking it down to market. It is sold to McLaren of Ottawa, and is to be used for railway purposes.

The season of towing has now fairly set in, the tugs Robinson and Bronson, being actively engaged in bringing down the logs from Des Joachim to the Fort William boom.

Trains of sixteen cars and upwards are now passing daily laden with timber got out on Mr. James Worthington's limit near Sudbury. The timber is clean and of an average good size. It is en route for the Quebec market.

A raft containing one hundred and sixteen cribs, and belonging to Messrs. Thistle, Francis & Co., is coming down the Ottawa. The timber, which is said to be of a superior quality, was got out near Cedar Lake, Petewawa.

A small craft belonging to Klock Bros., Aylmer, was running over the Des Joachims a few days ago. Much dissatisfaction is expressed by lumbermen on account of the new international bridge in many cases breaking the crib completely up. In all cases when the men on crib see that the crib is going to strike, they unhesitatingly jump off rather than risking their chance of being drowned than staying on the crib and being killed. Two Iroquois Indians, while running Thistle, Francis & Co.'s timber there last week, narrowly escaped drowning. They sprang into the foaming water just as the crib struck the pier, and lucky for them that they jumped in time, for in an instant after the crib, with a terrible crash, was knocked into shingle sticks. The Indians reached the shore much exhausted.

THE ORIGIN OF LOG RULES.

Mr. Henry Baxter, writing to the *Northwestern Lumberman* of May 10, says:—In the *Lumberman* of April 19, Mr. Peter L. Trout asks a question: "Why is it thus?" calling attention to the fact that Mr. Doyle's tables for the measurement of lumber in the log were not a true series; and why not; He has discovered a rate of progression that coincides with nearly all the terms of the 16-foot column, but not quite all.

At the time of my earliest recollection, boards were not measured, or bought and sold, by the superficial foot, or thousand feet as now. They were counted by the number of pieces. A board 14 feet long and ten inches wide, was one board; 15 inches wide was a board and a half; but the logs were uniformly cut 14 feet long, with an axe, butted in the mill with a butting saw, (now called a drag saw), and sawed almost always 10 inches wide. Sometimes a log would make "double stuff," that is, two 10-inch stocks. But with improved mills there became an apparent need of improved methods of handling as well as measuring. The lumbermen on the Hudson and Mohawk rivers began to run two saws in a gate and to count lumber by the superficial foot or hundred feet. All lumber was not made into Albany piece, or sold by the piece, as it had been when every log was hewed down to 10 inches in thickness and put upon the carriage of a curious gang mill and made into boards. Previous to using gangs, I learned that the whip-saw had been used to make Albany piece boards of the hewed stick.

The gang had a wooden crank, a wooden saw-gate without other metal than that about the saw hangings, and not much of that. It was a good many years after lumber began to be counted by the superficial foot, before there was any thought of taking the board measure of logs. Among men who manufactured or dealt in lumber, none could be found that knew anything about series, or the different rates of progression.

The first idea of making a log scale that I heard of was by means of diagrams. A circle was drawn of a given diameter, and the amount of timber it took to ordinarily make a slab was laid off, a board was then laid off and properly edged, and the stock, after being sided down, was turned down and laid off into board thicknesses, and all was then carefully measured, and the "contents noted." This process was repeated until all diameters of saw logs had been treated in the same way. Then on the basis of 10, the log being 14 feet, other lengths were increased or diminished in proportion as to quantity. Then the diameter of a log was measured, and it was made carefully into boards, which were carefully measured. The actual production was found to disagree with the amount given in the log table. More logs were tried in the same way, when it was found that scarcely any agreed with the log table, or with each other when of the same diameter. Longer logs were tried, when it was found that to add one-seventh to the amount made by a 14-foot log, would give a sum somewhat greater than could be got out of a sixteen foot log; that to deduct one-seventh from the amount produced by a 14-foot log, the amount would not be so great as a 12-foot log would make. So the scale was good for nothing, and any plan for measuring logs yet proposed had failed.

Another plan was then proposed and tried:—to carefully saw into boards, and measure 100 logs of each diameter of each length, and take the average, that is: add together the quantity produced from each log of 100, and take the hundredth part of the sum for the corrected measurement of all logs of that diameter and length. This must make the scale as nearly true as any plan we could devise. We thought all contingencies were then included and cared for in our plan. I notice that Mr. Trout has run into the same error that we did, in supposing that the quantity a log of a given diameter produces varies directly as to the length. It never entered into our heads that a crook does not effect a short log as well as a long one. When we found there actually was a difference, we could easily understand the reason.

When I began work on the Alleghany river, the custom was to make boards nearly one and quarter inches in thickness, and a new log scale had to be constructed. The plan adopted was the same as the one previously adopted. All logs were 16 feet long. By sawing according to the custom of the country, a 16-foot log, 19 inches in diameter, made an average of 200 feet a log. A corrected table showed that I could fill any omitted or lost quantity by a certain proportion. A 19-inch log produces 100 feet; 19 minus 1, squared, is 200, as the square of any given diameter less 1, is to the required amount, board measure.

I understood at the time that Mr. Doyle, in constructing his log tables, adopted the same plan of construction that we did. Scribner constructed, and published, a log table by diagrams, assuming that the tree was cut into lengths of 15-feet, but in practice it was found that a very large log would not produce near as much lumber as the scale indicated, and a small log would make more. He revised his table, and still it did not give satisfaction Doyle's came nearest to being satisfactory of any one published.

In view of these facts, is it at all surprising that Mr. Trout should be able to detect a seeming discrepancy? Mr. Doyle made no mistakes in his computations, and committed no error in adopting his methods of construction.

FORESTRY CONGRESS.

The Forestry Congress at Washington met last week, and was attended by many gentlemen interested. Papers were read by many of those present, and Mr. Phipps, who was there by special invitation, delivered an address. In it he pointed out the difficulties in the way of the cause in Ontario, and sketched the methods in which the Ontario Government were moving in the matter, stating that 15,000 copies of a forestry report had been already distributed; that the counties were being communicated with concerning the best method of encouraging the preservation of those portions of forest in private hands, and that an investigation of some of the large pine districts of the interior, with a view to their better security from fire and continuance in a reproductive condition, would soon be undertaken. In connection with the last, Mr. Phipps remarked that with regard to the removal of the *debris* of lumbering—the pine rubbish which is often the cause of great fires, there seemed to him, as an old chopper, no way but one. "If," he said, "you go into the forest for timber, the trunk of the tree is all you want; you do not need the top, with all its branches. If you need square timber there will be great slabs and chips; if round, there will be the chips of cutting the tree down. If you leave them to summer it will be dangerous to burn them. If you leave them a night snow may cover them. What must be done is, when you have got out your log or square stick, chop down the branches of the top until it forms a close mass, pile the slabs or chips on the top and burn it." If lumbermen could see their way to doing this tree by tree, which would undoubtedly be an increased expense, there would be much less food for forest fires. The result would be that lumber would cost a little more, but it would be a great point attained.—*Toronto Telegram.*

The Size of English Trees.

Evelyn mentions the oaks cut down at Newbury, in Berkshire, one of which ran 50 feet clear without a knot, and cut clean timber five feet square at the butt; another gave 40 feet clear, straight timber, squaring 4 feet at the butt and nearly three feet at the top. The "Lady Oak," mentioned by Sir E. Harley, produced a butt of 40 ft., and squared five feet throughout its whole length, thus producing 20 tons of timber. But the most magnificent oak ever known to have grown in England was that dug out of Hartfield bog; it was 120 feet in length, 12 feet in diameter at the butt, 10 feet in the middle, and six feet at the smaller end where broken off; the butt for 60 feet squared seven feet of timber, and four feet its entire length. The wych elm, which grew in Staffordshire (time Elizabeth), took two men five days to fell; it was 40 yards in length, 17 feet diameter at the butt, yielding eight pairs of naves, and 8,660 feet of boards; it contained 97 tons of timber.—*From Knapp's Journal of a Naturalist.*

THE Belleville *Intelligencer* says that Buck's drive, which came down the Moira and was driven by James Walker, measured about 30,000 feet. Three drams have been completed and the fourth will soon be finished here. Thirty-three men are now employed at the work. The rafting will be completed when some timber at points between this port and Hay Bay is collected. The tug Eliza Bonar will tow the drams to Garden Island and from there they will be taken to Quebec by the Hiram Calvin.

SUFFICIENT POWER.

Many a mill builder carries out a principle of false economy when he places the boilers and engine in his establishment. A weak man can not lift a heavy weight; a small horse cannot pull a heavy load; yet there are men, and plenty of them, who seem to think a small engine capable of driving heavy machinery. Too often machinery salesmen do much to induce men to believe this. Knowing the disposition of the majority of men to build as cheaply as possible, these salesmen argue that a small engine will do the work satisfactorily. "I want to cut from 40,000 to 50,000 feet of lumber a day," says the lumber manufacturer. "Oh, well," says the salesman, "this engine will do it." Probably it will do it. With easy feed the saw is driven through the log in a manner that cannot be complained of. But by and by there comes a time when there is need to hurry. Advantage is wanted to be taken of a good market, there is a big order to fill, or something of that kind, and the brake is taken off. The time has come to push things, but it is discovered, when it is too late, that there is no pusher. The little engine struggles, but with all its struggling the saw does not "walk" through the log. This, above all things, makes a saw mill man nervous, if not mad. He is anxious to see his mill go at a 2.40 gait, but it doesn't come under the wire in less than four minutes. As he is his own driver he knows there has been no "pulling," and must settle down to the conclusion that the whole fault is with the steed.

An engine should be of sufficient power to drive the mill to its maximum capacity, and that easily. An overworked engine complains as loudly as an overworked man. It speaks plainly for relief at every stroke. It says in language that can not be misunderstood: "You can work me thus hard, of course, if you choose, but though I am made of iron and steel, I cannot endure everything, and if you don't let up you will have to call in a physician." The engine speaks the truth. The strain and friction goes on, and the engine gets sick. It has simply worked itself sick. The physician comes in and at considerable expense doctors it up. Parts are replaced and everything is again put in good shape. The engine is again well, but it is no more infallible than it was before. The same cause produces the same effect. Overwork again prostrates it. A consultation is held and it is decided that the engine must go. It is set one side, and then the manufacturer of it hears that his engine that was put in at such and such a place has been replaced. It wouldn't do the work; consequently it must be a poor engine. Other manufacturers, to make capital out of it, slyly wink, and adroitly infer that the engine must be poor. The fact is, it is probable that the engine was first-class in every respect. It came out of a shop where excellent work is done and good material used. It was simply worked beyond its strength, and the manufacturers of it are not a bit to blame.

The result is damaging to the maker of the engine and to the man who purchased it. The latter has been bothered to such an extent that he has decided that the vexations of the saw mill business are many. The speed of the saw was not uniform enough to produce good lumber. There were big items of expense for repairs. He bore the taunts of his neighbors that he could not lift the broom over his ridge pole. There are unprofitable delays. The old engine has to be sold at a heavy discount, for the dealers in second-hand machinery are like those in second-hand clothing—they generally buy their goods for less than they are worth and sell them for more than they are worth. For the new engine there must be a larger and stronger foundation put in, and altogether the string of preplexities and expenses is a long one.

It is impossible for a man who builds a mill to know before hand how hard it will be necessary to drive it. If the price of lumber jumps up suddenly, he will feel like putting on all the steam and feed possible. And even beyond this something is liable to turn up. It may be found desirable to attach a planer, or some other machinery, and if it is it will be necessary to have enough power to run it, in connection with he saw. To incr . se the capacity of a mill is an almost every day occurrence, and, oftener than otherwise, such a change necessitates a new engine and boiler.

We have heard thousands of complaints from mill and factory men because they did not have enough power, but not one because of too much. It is safe to say that no mill man ever found fault because his engine was too large. If it is larger than he really requires, he is pleased rather than otherwise. He not only has the satisfaction of seeing his machinery running easily and at uniform speed, but he knows that in case of an increased demand for the product of his mill, he will be able to meet it promptly without additional expense.

Reserve power is always desirable, at times highly profitable, and the extra cost of an engine and boiler capable of producing such power is one of the best investments a mill man can make.—*Northwestern Lumberman.*

LUMBER IN THE NORTHWEST.

The Northwestern Lumber Manufacturers Association which met in Minneapolis, in April, proved to be an interesting one from several points. In his annual address the president pointed out a policy that might be pursued advantageously, but the trouble is getting the manufacturers to agree upon and adhere to any policy. He said:—"I respectfully suggest that the true policy for lumber manufacturers is to saw less lumber the present season than last carry the unsawed logs in 1885, and provide less logs hereafter, until consumption equals the manufacturing capacity of the country."

He further said: "Another important reason why an effort should be made to prevent a serious decline in values is the fact that the past history of the lumber trade shows that the market does not recover for years the decline of a few months, if caused by over production."

The president suggested that reports be received of the log cut during the past year on the different streams, and Mr. F. Weyerhauser reported that the cut on the Chippewa, exclusive of the Red Cedar and Eau Claire, was 886,000,000 feet, but low water threatened to make driving difficult. Mr. E. L. Hospes reported the cut on the St. Croix; that there were about 325,000,000 new and old logs on that stream.

Mr. G. S. Shaw, of Davenport, reported that he had learned that there were about 200,000,005 old and new logs, which is less than last year. The stock of lumber at La Crosse is low and at the points below the stocks are less than was the case last year. The prospect for the drives was not good.

Major Camp, for the the Mississippi, stated that that there was 190,000,000 old logs carried over, and the loss on these would probably reduce the amount to 170,000,000. The surveyor general estimated that there was 310,000,000 cut, which would make an aggregate of 60,000,000 less than last year. The stock of lumber on the sticks is about 70,000,000, which is about 20,000,000 more than was the case last year. Of the entire cut of logs, about 150,000,000 would not come to Minneapolis. He estimated that the cut of lumber for the current year would be about 250,000,000. Mr. Cranage for the Saginaw valley, reported that the cut of logs was about the same as last year, and that the stock of lumber was about the same. He did not think the lumber cut would be larger than last year. The water has been low. He thought if there was a deficiency it might be made up from the railroad point, but did not think the cut there would effect this market, as their market is for the most part East. Mr. Merriman asked if it was not a fact that the low grade lumbers went West, while the high grade went East. Mr. Cranage was unable to state.

Mr. Swan, of Muskegon, reported that there is about 500,000,000 of old and new logs in that stream; about 200,000,000 old logs carried over and 100,000,000 feet piled up.

The same condition in relation to water prevails on the Muskegon river as upon other streams. The water was exceedingly low. The sale of lumber had been very small thus far, and it had been the theory that it would take care of itself, and that no amount of doctoring would help it. The feeling is general among manufacturers not to push anything upon the market. Dealers are generally in a better condition to hold it, and on the Muskegon the sales of stumpage has been at such figures that it could not be cut except at a sacrifice at present prices.

Mr. E. W. Durant, of Stillwater, thought the situation had changed within the past twenty days materially. There did not seem to be a prospect of making good drives. If nature is obstinate it will settle the price of lumber better than this convention can. It seemed advisable that a committee be appointed to report a plan for consideration at the afternoon session. The situation had undoubtedly changed for the better within the past ten days. Gov. Ludington said that on Menominee 100,000,000 logs had been carried over and 400,000,000 had been cut, which was 150,000,000 more than could be handled in the boom. He thought that all of these logs would be got down. He believed with Major Camp that we were going too fast in the lumber business.

The chair appointed a committee representing the various streams, which after a thorough canvass reported the log cut to be found as follows:

District.	*Supply of* 1883.	*Supply of* 1884.
Black river	260,000,000	225,000,000
St. Croix	325,000,000	310,000,000
Chippewa	1,200,000,000	1,200,000,000
Eau Claire	100,000,000	90,000,000
Red Cedar	110,000,000	125,000,000
Duluth	185,000,000	120,000,000
Ashland	45,000,000	45,000,000
St. Louis river	60,000,000	60,000,000
Wisconsin river, including Stevens point	300,000,000	300,000,000
Hung up below Pepin	35,000,000	20,000,000
Minneapolis	540,000,000	840,000,000
Total	3,420,000,000	3,250,000,000
Michigan	3,800,000,000	4,200,000,000
Hung		829,000,000
Shortage on same basis		400,000,000

In the afternoon session the committee appointed to formulate a plan of action for the formation of a strong organization among the manufacturers made their report, from which we extract the following preamble:—

"That the log stock of Michigan, Wisconsin, and Minnesota for the season of 1883 and 1884, old and new logs varies but slightly from the cut of 1882 and 1883. That the prospects of a successful drive are very unfavorable throughout the Northwest. That the supply of available logs in sight in the waters of the Northwest will not supply the mills to exceed thirty days. It is found that the supply of logs on the Mississippi and its tributaries is 170,000,000 feet less than last year. That the Michigan district has an excess of 400,000,000 of logs which is more than counterbalanced by the shortage of lumber in the Northwest, leaving the general situation more favorable than it was one year ago."

A formal discussion was entered into. Mr. Ingram thought a big mistake was being made in the effort to cut everything clean from land. The theory has been entertained that unless the timber is cut clean, that the fires would run through and destroy the standing pine. He believed that the owners of stumpage should cut reasonably clean, clear up the under litter, as far as possible and in five years the small timber may be taken and pay for the extra cost. He thought the over-production was largely due to the purpose to cut perfectly clean, and to take lumber of all grades.

Major Camp took issue with Mr. Ingram and held that if the policy was adopted there would sooner or later be an over stock of uppers and commons would be worth most. He thought the time was coming when it would be impossible to buy uppers at any price. The trouble was that the milling capacity was too great, and owners thought it was imperative that the mills should be stocked and run. The only way the thing can be prevented is to reduce the cut.

Mr. Bassett did not think the amount of lumber on hand was unnsually large. Sight had seemed to have been lost of the fact that the consumption was steadily increasing and where twenty-five years ago 100,000,000 feet was consumed, 2,900,000,000 feet were now required. —*American Lumberman.*

A BAD CASE OF STARVATION.—To starve the lungs by a lack of vital food contained in pure air. If the lungs are obstructed by colds, remove the accumulated phlegm with the safe and pleasant throat and lung remedy, Hagyard's Yellow Oil.

DRYING LUMBER.

A new process for drying lumber in just now attracting attention. It is said to be the most effectual and economical method ever practiced. No kiln is necessary, although where a shop has one it can be utilized to an advantage. The process has the great advantage of keeping the surface of the lumber moist during the drying; this holds the pores open, obviates all tendency of cracking and leaves the albumen free to perform its functions. In ordinary kiln drying the albumen is injured or destroyed, and the surface dries first, thus sealing the juices inside, to escape eventually through cracks caused by the uneven expansion of the wood. Some readers may perhaps be surprised to learn that the process consists in surrounding the wood to be dried with common salt; but those who are acquainted with the peculiar power for extracting moisture which salt possesses will not be at all astonished at this novel and ingenious utilization of this power.—*Builders' Journal*

AUSTRALIAN TIMBERS.

It has repeatedly been asserted that Australia is deficient in timbers suitable for building and other industrial purposes, but the assertion is utterly without foundation. On the contrary, the various colonies, especially New South Wales, are rich in timbers of every possible description, many possessing a beautiful color and grain, rendering them eminently suitable for decorative woodwork. Among the more plentiful of the New South Wales timbers are the following:—Ironbark, generally used for railway purposes, and girder beams for buildings. The retail price is 2s. 6d, per cubic foot for girders, and £1 5s. per 100 superficial feet for sawn timber. Grey gum, generally used for building purposes, palings, and fencing, and is retailed at 18s. per 100 superficial feet. Blackbutt, greatly used for all kinds of house and shipbuilding purposes, and also for street paving cubes; price 18s. per 100 superficial feet retail. Spotted gum, mostly used for shipbuilding, owing to its long lengths and bending qualities; price, 18s. per 100 superficial feet retail. Mahogany, used for fencing and general purposes, is considered to be able to stand a long time under ground; price, 18s. per 100 superficial feet retail. Tallowwood, one of the best timbers for building purposes that can be obtained in the colonies, having a greasy nature resembling Indian teak, and sells at about the same price as ironbark. Blue gum, greatly used by wheelwrights, and also used for general purposes, and belong to the best class of timber growing in this colony; price, 18s. per 100 superficial feet retail. Colonial pine is largely used for all rough purposes in house-building and box-making, and also for flooring boards, and sells at present at £1 2s. per 100 superficial feet retail.—*Land and Water.*

FREE LUMBER.

In a very few years, unless some relief can be afforded them through the free introduction of Canadian lumber, our most valuable forest will have disappeared forever. It is no use trying to avoid this question. Either the duty upon lumber must be taken off or the country must be prepared to lose its white pine forests—long before the close of the present century.

Suppose it could be known that at the present rate of consumption all the coal or all the iron ore underlying the United States would be used up at the end of ten years; would any one for moment advocate an import duty on those articles or seek to exclude their importation into this country? And yet this is the policy of Congress with regard to the supply of pine lumber.

It is known with as much accuracy and precision as such a thing can be known just what is the existing supply of pine and spruce now standing in the United States. It is known that before ten years have passed all our northern pines and spruces will have been manufactured into lumber if the present duty upon such lumber is not removed and the Canadian forests allowed to compete upon equal terms with our own forests in supplying the United States with building materials. This is protection carried to the utmost limit of absurdity.

One of the greatest and most important sources of the prosperity of this country is

placed in imminent peril, not to produce a necessary revenue, for practically the duty produces nor revenue worth considering, but to enrich a few thousand wealthy land owners and manufacturers bent on sapping the nation's wealth for the benefit of their own pockets.

That such a condition of things is allowed to exist for a single day longer is not very conclusive evidence of the astuteness and business sagacity upon which the American people are accustomed to pride themselves.

It is, perhaps, not yet to late for the present Congress to consider this subject and act upon it intelligently. A bill placing lumber upon the free list was introduced into the House by Mr. Dorsheimer, of New York, early in the session. It should be passed as a separate measure now, because it is of prime necessity to husband our forest resources in every possible way. There may be more important work for Congress to attend to than this, but if there is it has not come within the range of our vision. *Boston Herald.*

A Collection of American Woods.

Under the auspices and at the expense of the banker, Morris K. Jesup, says a New York paper, a collection of the native woods of the entire United States is being prepared, and will be completed some time this year. It is to be presented at the Museum of Natural History in Manhattan square. The logs are being prepared in the arsenal at Central Park. They are, for the most part, five feet long. At one end a section of half the thickness of the log is removed. In this way the longitudinal and transverse grainings are both shown. There is also a diagonal cut on the section, which displays that graining also. The remainder of the log remains in its natural condition with the bark attached. The work is being done by S. D. Hill, under the general charge of Prof. Sargent, of Havard university. Mr. Hill prepared the specimens for the forestry department of the United States census of 1881.

Another Log Story.

The Mobile, Ala., *Register* says: Recently, the 66 inch circular saw at Stoutz & Co.'s mill running 800 revolutions per minute, struck something in a pine log, and flew into a number of piece, The engine was stopped, and an examination of the log showed that the saw had struck a six-inch iron shell in the tree, cutting off enough to show the powder inside. The slab and one plank had been sawed off, and thit was the third cut, showing how deep the hell was embedded. The log was cut from the land in the vicinity of Spanish Fort, and it is believed that this shell was fired into the tree during the terrific bombardment of that place during the late war. It was fortunate that the shell did not explode.

Fresh Uses For Paper.

Paper spokes for wheels are among the latest appliances for that ever-increasing article. The paper pulp is forced into iron moulds under heavy pressure, where it dries and hardens; and the spokes thus produced are said to be much superior to wood. Paper is fast supplanting wood in many useful ways.

A paper chimney fifty feet high has lately been put up at Breslau. Compressed paper pulp is stated to be one of the least inflammable of substances, and to make an excellent material for fire-proof doors.

THE stable and blacksmith shop of the Duluth Lumber Company, near Duluth, Minn., were burned May 9. In the stable were 22 horses, 19 of which were burned to death. Three of the horses were taken out of the burning building, but two were so badly injured that they were killed for mercy sake. From the stable the fire communicated to the blacksmith's shop, which was quickly destroyed The barn stood on a foundation of mill refuse, and it was feared that the fire would work through the mass, which was very dry, and thus ignite the mill. A trench was accordingly dug through the debris, so as to cut off the advancing fire. By the strenous efforts of the firemen and mill hands the company was saved a total loss of its property. As it was, the loss amounted to $6,000, with no insurance.

A Large Orange Tree.

An orange tree on the farm of Mr. Berrien Blatt, in Hillsborough County, Fla., is said to be the largest in the state. It has a single solid trunk that measures 5 feet, 8 inches in circumference, 15 inches above the ground. This gives a diameter of about 23 inches. The trunk is much larger than this at the surface of the ground. The limbs have a spread of 32 feet and the height of the tree is 36 feet. These figures are all from actual measurement. The crop of oranges upon it the past season numbered a little over 10,000,000. Mr. Platt says he wouldn't take $1,000 United States bond for it. —*American Lumberman.*

Arbor Day at Quebec.

QUEBEC, May 12.—The second annual celebration of the great national festival of Arbor Day was marked this morning by the display of flags from the terrace, the City Hall, the foreign consulates, and many other public and private buildings. The civic and military dignitaries assembled on the plateau on the cove fields, east of No. 1 tower. Two acres of land were to-day planted with the first instalment of 600 trees purchased by the Dominion and Provincial Governments and the city. The officers of the garrison were in attendance with their band and a large concourse of ladies and gentlemen.

Death of Mr. Calvin.

Mr. D. D. Calvin, ex-M. P. P. of Kingston, died on May 18th. after a severe illness. He was a public spirited man and a veteran in the wrecking and forwarding business.

It is proposed to erect a grand monument on Garden island to his memory.

Advice to Mothers.

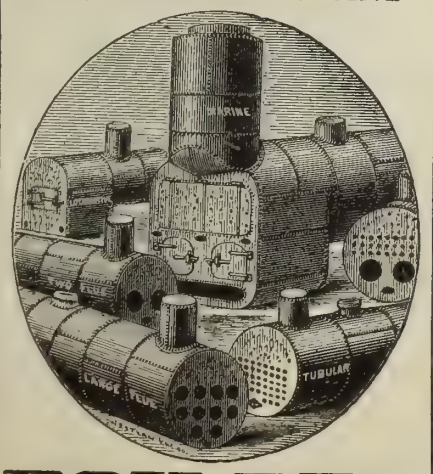
Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain and cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup for children teething. Its value is incalculable It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentery and diarrhoea regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation. and gives tone and energy to the whole system, Mrs. Winslow's Soothing Syrup for children teething is pleasant to the taste, and is the perscription of one of the oldest and best female nurses and physicians in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

A HANDY SURGEON.—As a dressing for all manner of flesh wounds there is nothing better than Hagyard's Yellow Oil. It cleanses, allays pain, subdues inflammation and heals without a scar or stifiness of the parts injured. It is equally valuable as a pain remedy for internal use.

DON'T BE GIDDY.—Many people are troubled with giddiness or dizziness, which is generally a sign of disordered digestion or unequal circulation. Burdock Blood Bitters restores the digestive powers, promotes a healthy circulation of the vital fluids, allays nervous irritation, thus curing headache and giddiness,

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A HALT NEEDED TO BE CALLED.

In the lumber industry there is surely something rotten in Denmark. There is a wrong principle underlying the ways of conducting the lumber business. There is an absence of firmness and a lack of determination on the part of the manufacturers to obtain for the product of their mills what it is worth. There is a saying that any article of trade is worth just what it will sell for, and no more. In one sense this old saying, as applied to lumber is wholly wrong. Unwise competition may force prices below where they would go were trade allowed to take its natural course. Hot-house processes, as much as they may be beneficial to the growth of certain plants, are detrimental to any branch of trade.

If the amount of standing pine could not be approximately estimated; if stumpage was of no value; if there was not rapid depreciation in mill property, then a low price for lumber might be excuseable. But that the great body of white pine will in a short time, as compared with the time that our great and growing country will demand lumber, be practically exhausted; that stumpage has a positive value, no matter how little it may have cost the present owners of it; that saw-mill machinery from wear and fire is short-lived, are facts acknowledged by all. Then why should a business that is limited as to the time it can be conducted, and the conduct of which is expensive, be carried on at a small profit to some and an absolute loss to others?

Of late years it has been charged by manufacturers that the jobbers of the Chicago and other markets have been responsible for the unsteadiness of prices. The *Lumberman* has claimed that the argument was fallacious, and the conditions of trade as they now exist prove that such is the case. It is for the interest of the jobbing trade to buy as cheaply as possible, but no matter how much of an effort the jobbers might make to hammer prices, if their yards could not be filled at one price they would at another. The manufacturers have this matter in their keeping. But it seems they do not keep it well. There is no more competition today between jobbers and manufacturers than there is between manufacturers themselves. A majority of the latter have also become distributors, and when several of them meet in one neighborhood to look after their customers they pound prices as hard as the jobbers ever did. The interior Michigan mills make it interesting for one anothers' customers in the territory reached by these operators south of the state line, and the first cut in uppers of which we learned this spring was made by these very mill men. Yet they stand up and denounce the jobbers, and say they are everlastingly trying to stave the bottom out of the market.

The same conditions exist west of here. Duluth and Minneapolis have had a fight in the Northwest, and Duluth has come out ahead because her mill men can handle their lumber for less money than the Minneapolis mill men can. The latter sought to overcome this disadvantage by low prices and big discounts, but when the other side resorted to the same practices, the disadvantage of the big Minneapolis handling bill was still apparent. So, too, the mill men on the upper waters of the Mississippi, have endeavored to knock out the lower river men, and have succeeded to such an extent that some of the latter openly declare that their present locations are not profitable ones for saw mills. Even the log towing bill stands in the way of successful competition with their neighbors up stream. The policy with the manufacturer is to sell lumber at a fair price if they can, but to sell it anyhow.

This policy we regard as wrong, for the reasons heretofore stated in this article. Every foot of pine in the Northwest ought to bring a price that will pay a fair profit to the owner and manufacturer of it, and further, to both the jobber and retailer. Such a price would be no hardship to any one, and a positive benefit to many. The consumer would be obliged to pay more for lumber; but $2 or $3 per thousand feet on the amount of lumber that enters into the construction of the average house or barn would cut but a small figure. If that amount were added to the price of lumber, building operations would not be curtailed, provided the builders were satisfied the prices had gone up to stay. It is the uncertainty as to prices that calls a halt in improvements.

If firmness could be sustained, not only the retailers but the jobbers would be relieved. As it is now, they do not know when to buy. If lumber is cheap this week it may be cheaper next, and it is almost sure to be if salesmen from different territories visit the town at about the same time.

The *Lumberman* is by no means in favour of exorbitant prices, and prices that would pay a living profit to all, from the owner of the stumpage to the retailer, would not be exorbitant. Such prices every business should be expected to pay, and does pay when well conducted. Lumber is a staple commodity, and its value should not be tossed about by bulls and bears, as though it was the watered stock of a railway corporation. It is admitted now that there is little that is speculative in the lumber trade, and if not then values should not be subject to fluctuations that cause distrust and halting by any branch of the trape. The manufacturers, and they only, can say whether the same conditions which now govern the trade shall continue to govern it.—*Northwestern Lumberman.*

FOREST FIRES.

During the past few days the people of New York, New Jersey and Pennsylvania have had sad experience with forest fires, and they have come, too, at a time when they were least expected. Forest fires are usually looked for in times of drouth, and particularly in the latter part of summer or fall, but this time they came before the summer heat has parched the earth, and soon after, if not really before, all the snow in the northern part of New York state had disappeared.

To even approximately estimate the yearly loss from burning forests would be a difficult, if not a hopeless task. There is not only immense loss of property, but every few seasons a loss of life as well. The Peshtigo and Michigan fires, which were so productive of loss of life, are fresh in the minds of all, and rarely a season passes that several names are not added to the frightful list. A person cannot realize to what extent those fires have raged until he has travelled through the Northwest and seen the thousands of acres that have been burnt over, with the millions of trees standing thick, black and limbless. White pine owners estimate that there is one chance in ten that their possessions will be swept by fire every year, and without doubt the per centage is placed low enough. Indeed, many a careful investor shuns pine lands for this very reason.

On the Pacific coast the losses have been many and heavy. The South is the only section that has escaped, and the fires in the Carolinas a few weeks ago prove that even that section is not exempt in the neighborhood where turpentine is made.

What is to be done about it? Forest fires are preventable, the same as many other calamities may be prevented. But no preventive steps are taken. There is a horde of "foresters" and officeseekers who are everlastingly shouting, "Plant trees! plant trees! plant trees!" But we never hear them say a word about protecting the trees we already have from their worst enemy. They seem to think that it is a more laudable undertaking to set out a little staddle or plant a seed that will not become a tree of much worth until we are all dead than it is to protect a tree that is already grown. They should understand that protection is of more importance than reforesting; that at present there is no lack of trees of most kinds, and that their number could not be greatly increased, or, rather, the portion of the country now covered by forests could not be greatly enlarged, except at the sacrifice of agricultural interests, until farming becomes more of a science than it is now. Sure enough, the entire Ohio valley might be reforested for the alleged purpose of preventing floods which have swept that valley from times immemorial; but if it were, it would be interesting to know what would become of the inhabitants.

The only way to prevent forest fires is to collect and burn, under supervision, the dry bush and tree tops. Fire cannot exist unless it has something to feed on. This journal has held for a long time that every lumberman operating in the woods should be required by aw to take such care of his leavings that they will not hazard the property of his neighbors. This would be a good deal of labor, and it would cost a good deal to of money, but if thereby even a half of the losses by forest fires were prevented, both the labor and money would be well expended. And this rule should not be observed by lumbermen alone, but by others. In forests in which operations are not being carried on there is a constant accumulation of dry limbs and fallen trees, and these the owner of the land should be obliged to remove in some way, providing his wood joins others. If a man's timber is isolated to such an extent that, in case it burned, the flames would not be communicated to the timber lands of others, then let him do as he has a mind to. If he can afford to have his timber destroyed by fire others should not object.

The greatest difficulty to be met in the prosecution of such a work would be from wind-falls. It would seem sometimes as if nature stepped in to hasten the coming of the flames. Swarths, of such dimensions as only the elements can mow, are cut through the forests by the wind, and for miles and miles every tree of decent size is laid flat. These windfalls are prolific of intense forest fires, and they have been the starting point of some of the worst fires on record. Here is where nature comes in and says that her trees are not all for the benefit of man, but that she will destroy a portion of them in her own good time and way.

The method described is the only one we believe to prevent forest fires, but the prosecution of it means difficult and prodigious work, and for this very reason, perhaps, it is not advocated by the "foresters," "botanists" and professors who now-a-days are so ready with their advice on all subjects pertaining to our forests, when really they no little about them.—*Northwestern Lumberman.*

CEYLON BOTANIC GARDENS.

In a handbook recently issued by Dr. Trimen, the following interesting particulars are given: The Royal Botanic Gardens at Peradeniya were established in 1821, six years after the final occupation of the Kandyan Kingdom of the English. The site is a little less than four miles from Kandy to the Colombo road, and occupies a loop of the river Mahaweli, which surrounds it on all sides except the south, where it is bounded by the high road. The area, nearly 150 acres in extent, beautifully undulated, its average elevation above sea level being about 1540 feet. The climate is hot, moist, and very equable; the mean annual temperaure is about 77° F., April and May being the hottest and December the coldest months. Rain falls on about 200 days in the year, the annual rainfall being about 85 inches; it is pretty evenly spread through the year, but is heaviest in October and November and in June, at the full establishment of the N. E. and S. W. monsoon respectively. February and March are the driest months, but even then there are showers at no distant intervals. Before its occupation as a Botanic Garden the greater part of the land had been a royal demesne occasionally occupied as a residence by the kings of Kandy. The earth-mound and ditch along the south boundary are still evident, and remains of stone buildings have been found. The name *Pera*, Guava, and *deniya*, an enclosed place—indicates its use as a fruit garden of which the existence of some very odd mango trees is further evidence. On onother part of the site stood a small temple or flower shrine and priest's house, abandoned, however, before the formation of the garden. This garden now contains considerably over 2000 species of plants. The director has also under his charge, as adjuncts to the Peradeniya Gardens, smaller branch establishments in different climatic districts of Ceylon. Hakgala Gardens are situated at an elevation of 5500, about six miles to the east of Nuwara Eliya on the road to Baduila. They were opened in 1860 as a cinchona nursery. The climate admits of cultivation there the numerous European and Australian plants, and those of the tropical mountain regions. Henaratgoda Garden is a completely tropical one, scarcely above sea level, and in a wet steaming climate which varies little. It is about three-quarters of a mile from the railway station of the same name on the Colombo-Kandy railway. Many of the plants grow at Peradeniya flonrish there with far greater luxuriance, and others can be cultivated there only.—*Federal Australian.*

THE LUMBER OUTLOOK.

Now that the logging season has closed we have endeavored to inform ourselves of the situation, and are gratified to know that the resolutions made by our lnmbermen last fall to curtail the output of logs has resulted in a material reduction. The Ottawa district shows 1,500,000 less logs on hand than at this date last year, which, averaging the logs at seven to the thousand feet, would be equal to 215,000,000 feet; while the reduction in the St. Maurice district is proportionately greater, being from 50,000,000 feet last year to 15,000,000 feet this year, or a reduction in the output of pine of 250,000,000 feet in these two sections. Should it also be found, which is believed to be the case, that the pine-producing districts of the Georgian Bay, Muskoka, Peterborough and Trent have made similar reductions, there would this year be fully 500,000,000 feet less pine to cut than last year.

Coupling the foregoing with the statement made that the spruce product of New Brunswick and Maine is 268,000,000 feet less, and the further fact that our own spruce districts of the St. Lawrence and eastern townships have greatly reduced numbers of logs, many mills not having stocked up at all, we cannot be far astray in estimating the shortage in pine and spruce east of Lake Huron at one thousand million feet. This curtailment in supply must have the effect of restoring the lumber industry of Canada to its normal condition, and if the conservative action of the lumbermen meets with its reward in enhanced prices for their stock, few will regret it. That the lumbermen may reasonably anticipate higher prices is evident when it is seen that the stock is only two-thirds of last year, and since the home consumption was then fully one-third of the stock, and there is now every appearance of an equally large home consumption this year, this amount, deducted from the small stock of the present season, would obviously leave only about one-half as much on hand for export to Britain and the United States.—*Journal of Commerce.*

A PLEA FOR TREE PLANTING

The following article from the New York *Independent* will repay perusal, at this time:

"In every town and village something can be done to beautify and greatly improve the public grounds and highways. All that is necessary is for some one or more persons to start the wheels and unite in calling a meeting of the residents to discuss the matter. Let the ladies take hold in good earnest and start the movement. A village society once organized could do, in a very few years, an astonishing amount of work, with very little effort. One single day in a year devoted to village improvements would very soon change the whole appearance of any place. Such work is rapidly increasing in popularity. Mr. B. G. Northrop, of Connecticut, is now giving almost his whole time in lecturing on the subject of Rural Improvements.

What he said, in a recent address in Shelbyville, Indiana, is highly spoken of by the *Indianapolis Journal.* We copy from a recent report the following interesting points, given by Mr. Northrop on that occasion. His topic was 'Arbor Day.'

It may be objected to Arbor Day, or to any school lesson on forestry, that the course of study is already overcrowded. I reply that the requisite talks on trees, their value and beauty, need not occupy three hours, all told. Those talks on this subject, which Superintendent Peaseley says were the most interesting and profitable lessons the pupils of Cincinnati ever had in a single day, occupied only the morning of Arbor Day, the afternoon being given to the practical work. Such talk will lead our youth to admire our noble trees, and realize that they are the grandest products of nature, and form the finest drapery that adorns this earth in all lands. Thus taught, they will wish to plant and protect trees. This love of trees early im-

planted in the school and fostered in the home, will make our youth practical arborists.

Teachers can easily interest their pupils in adorning the school grounds. With proper pre-arrangement as to the selection and procuring of trees, vines or shrubs, Arbor Day may accomplish wonders. Many hands will make merry as well as light work. Such a holiday will be an attractive occasion of enjoyment and improvement. The parent should be persuaded to approve and patronize the plan. It tends to fraternize the people of a district, when they thus meet on common ground, and young and old work together for a common object, where all difference of rank or sect or party are forgotten. The plantings and improvements thus made will be sure to be protected. They will remain as silent, but effective teachers of the beautiful to all the pupils, gradually improving their taste and character. Such work done around the school naturally extends to the homes. You improve the homes by improving the schools as truly as you improve the schools by improving the homes.

Our youth should early share in such efforts for adorning the surroundings of their homes and planting trees by the wayside. How attractive our roads may become by long avenues of trees. This is beautifully illustrated in many countries of Europe. Growing on lands otherwise running to waste, such trees would yield ample returns. The shade and beauty would be grateful to the traveller, but doubly so to the planter. Having in abundance the best trees for the roadside, no class can contribute so much to the adornment of our public roads as the farmers. In portions of Germany, the land owner was formerly required to plant trees along his frontage. Happy would it be for us if our sovereigns of the soil would each make such a law for himself. When, in any community, each citizen is stimulated to make his own grounds and wayside neat and attractive, the entire town becomes so inviting as to give new value to its wealth and new attractions to its homes."

NEW CAR ROOF.

A Detroit car roof and paper manufacturing company has introduced an innovation in the way of car roofs made of paper. The paper is made of jute, the pulp being first wrought in sheet form the thickness of very heavy wrapping paper. Then it is cut into sheets 3x4½ feet in size, and by laying these sheets together by a peculiar process and chemical compounds a block from six to eight inches thick is formed. This paper block is then placed under steam pressure of twenty-two tons to the inch, and is made into a board three-fourths of an inch thick. When completed the board is of a texture of very close-grained wood. It may be cut like wood of the toughest kind. Being absolutely free from the possibility of knots, rot, or sap, the paper boards will not split, check, or decay, and yet with all their toughness and strength they are elastic and bend without breaking. In forming the roof these boards are laid with their ends nearly together at the ridge of the roof and with their sides closely fitting together. The average life of a freight car is eleven years and the average life of wooden roof is nine years. In consequence the item of roof repairs is a large item for car companies and railroads. A paper roof is guaranteed to last as long as a car does, because the paper composition hardens with exposure, it will not warp, split, burn, or break, and it is considerably lighter than either wood or iron.

HICKORY.

Some of our native woods cannot be equalled or be superseded by any foreign woods; in all our knowledge of natural history there has been found nothing possessing the excellent qualities of our native hickory. It is now, as commonly supposed, that good hickery must be grown in the north to be of the best; its habitat extends from the Green Mountains in Vermont following the coast range, the Alleghanies, and the Blue Ridge through the Carolinas, and even to upper Florida. And, contrary to general supposition, the very best of hickory used in the arts, where toughness is required, is obtained from North Carolina and eastern Tennessee.

"It is wonderful what toughness the hickory timber of that mountain region is capable of," said a wheel maker recently. "We can turn a piece completely around a circle without breaking a fibre." This, of course, after it is thoroughly steamed.

The First of the Season.

QUEBEC, May 19.—The tug Sir John A. Macdonald arrived down from Garden Island on Saturday with a raft of square timber in tow, which was placed in different booms along the cove. It is the first raft to arrive this season.

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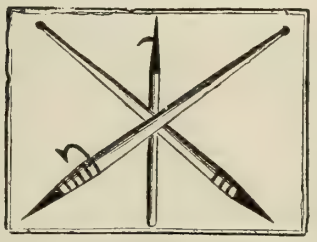
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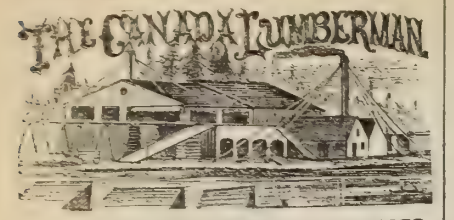
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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., JUNE 2, 1884.

OWING to heavy snows on the Adirondaks last winter, and improvements made recently in the rapids of the upper Raquette, the drive down that stream to the mills at Potsdam, N.Y., and below is much earlier than usual. The mills are now busily sawing.

THE manufacture of spools for the great Williamantic Thread Company, is of itself a great industry. The company has 125 men in the Maine woods getting out spool timber. An idea as to the immense number of spools required can be arrived at when it is known that 80,000 gross, or 11,520,000 spools were ordered by this one company for one month.

A SAW mill set works, or improved head block for saw mills, has been patented by Mr. Robert R. Parson, of Jackson, Miss. The setting shaft is geared with a rack on the under side of the head block, the shaft having its bearing in the block, and there being a spring applied thereto and to the head block, with various special combinations and arrangements of parts.

IN one of the largest saw mills in Memphis, Tenn., recently, a seventy two inch saw, while running at full speep on an eight-inch feed, struck a heavy iron dog. The effect, as described by a correspondent, was frightful. The large saw was broken to atoms, as was the thirty-inch top saw. Every pulley on the mandrel was broken. Such accidents will happen occasionally, but this class of accidents can only be avoided by constant careful attention.

THE Kingston *News* says that W. R. McRossie has returned from Calabogie, where he purchased between two and three hundred cars of square timber. It will be brought to Kingston over the K. & P., rafted and taken to Quebec. Hitherto timber from the district was sent to Quebec via Ottawa, and this purchase by Mr. McRossie will be the first that will come this way. A quantity of lumber will arrive from the Mattawa over the K. & P., and it will be the first consignment of the kind from that place also.

THE Brompton Lumber Company has purchased some 800 acres of timbered land near Leeds and Brompton, N. C. The greater part of the timber is lying on the ground, having been blown down by the recent cyclone. This fallen timber is estimated at some 20,000,000 feet.

AT a meeting of the American Forestry Congress in Washington the other day, John S. Hick, of New York, urged the planting of trees by railroads and showed that it would require nearly one-half a mile in width of growing timber beside each mile of railway to produce a sufficient number of ties for its use exclusive of the timber used in bridging and fencing. This is the age of railways, and if the people could appreciate the wholesale destruction of trees for railway purposes alone they would see the necessity for careful Government supervision of our forests and the general planting of trees by the people.

WALNUT LUMBER SITUATION.

The walnut trade in Boston for the past six months has been very dull and prices have ruled low. Boston is the second walnut consuming market in the country, New York being, perhaps, the first. In this city the main use for walnut is the manufacture of furniture. The furniture trade has been very dull during the past six months and the manufacturers have bought walnut only as they have needed it, then again, there has been a decided change towards cherry for furniture and this has lessened the demand for walnut somewhat also. The result has been, says the Boston *Commercial Bulletin*, that the large stock of walnut, mainly consigned, which was on the market in the fall, has been sold at prices lower than western, adding freight and purchasing cost. Sales of No. 1 and 2 walnut were made, two months ago at from $75 to $85, and lots running $75 per cent No. 1, were sold at from $80@85. Dealers are now asking $90@95 for the same grade of lumber and are making a few sales at that price.

This advance has been due to the fact that the prices in this market were ruling below the western and southern markets and as the stocks here were gradually worked down it was found impossible to replace them at such low figures, The western and southern markets have ruled steadily at about $75 for No. 1 to which added from $12 to $15 per thousand freight and this market at $90@$95 per thousand is only a parity with them. The stocks here at present are light and the receipts are small. The spring demand for furniture has been very small and the furniture manufacturers have generally good stocks of furniture on hand and will not buy lumber. Trade being thus dull there is no inducement for the lumber dealers here to lay in any considerable stock of walnut. The mill men do not care to consign it here being afraid of the same result as in the fall and also as they are meeting with a better demand for it in New York, Philadelphia and Chicago.

The outlook for any substantial improvement for some time to come in the demand for walnut in this market is poor. Owing to the very bad weather and the lateness of spring, the furniture manufacturers have had but very little spring trade. They have generally large stocks which they will carry over into the fall and until these are disposed of they will buy sparingly of lumber. The stocks of lumber here being light, the course of prices depends to a great extent on the western and southern markets. Very little walnut comes from Indiana and Ohio, formerly the main sources of supply, as those districts are practically exhausted. Tennessee and Kentucky now furnish most of the walnut and some is received from Arkansas and Missouri. The lumber received from these States is not as good as that formerly obtained in Indiana and Ohio.

Prices in the west have ruled steady for the last six months. At present there is a disposition on the part of some dealers to advance them owing to the reported operations of an English syndicate who, it is said, have already purchased 5,000,000 feet of lumber and aim to control the walnut trade. They are operating, it is stated, from Nashville, Tennessee, through a lumber dealer and furniture manufacturer of New York city, named Herrman, who has a branch at Nashville. Some dealers, however, express a positive disbelief in any English syndicate, and think it a plan of several dealers who are heavily loaded to bull the market and get rid of their surplus.—*American Lumberman.*

FORESTRY EXHIBIT.

On a recent express train to Port Arthur was an extra baggage car containing one of the most interesting exhibits of the natural resources of the Northwest ever collected. The exhibit was destined for the World's Forestry Exposition which opens at Edinburgh, Scotland, on the 18th. of June. It comprised the following articals:

A portable house 12x15, furnished with the common furniture ordinarily used by the settler, also a rough stable roofed with slabs and a driving shed. A barb wire fence was also provided and the whole will be displayed in a similar manner to a prairie homestead. The furniture is of native manufacture and was supplied by Messrs. D. Scott & Co., the barb wire fence by Messrs. Mullholland & Bros. and the buildings were manufactured by the Northwest Lumber Co. from native timber.

The display of agricultural implements was prepared by Messrs. Harris Sons & Co., and consists of wagon, sleigh, plough, harrow, and mower, finished in extra style. A pump made by a Winnipeg firm from native wood and a collection of the ordinary tools used on a farm, such as wheelbarrows, bucksaws, etc., formed part of the exhibit.

The most interesting part of the exhibit is a collection of native woods, comprising thirty-seven varieties, the principal of which are spruce, tamarac, white pine, poplar, birch, Norway or red pine, balm of gilead, balsam and elm, some of which were three feet in diameter and all sound. Samples of the some woods manufactured were sent.

The C. P. R. land department contributed a complete assortment of Rocky Mountain timber and also sent their usual exhibit.

The collection has been prepared by Mr. T. H. Carman, as managing director of the Northwest Lumber Co., under whose auspices it is being exhibited, and great credit is due to that gentleman, as the exhibit will havea strong effect to dispel the erroneous impression that has been spread abroad in the United Kingdom, that the Northwest is a treeless country.—*Winnipeg Times.*

WOODEN PIPES

Just now a good many lumbermen, for some unexplainable reason, are looking at wooden pump manufacture as a possibly profitable investment for their money and machinery, and the *Lumberman* has received several letter making inquiries in regard to it. It seems likely that the past two years have been so unsatisfactory to the hardwood manufacturers that they are looking around for some other line akin to their old business, and a number haveh it upon the pump log trade as offering inducements.

In conversation with the president of one of the largest wooden pump manufacturing companies in the country, the following facts were learned: The pump men generally bore their own logs, and prefer to do so unless they receive special inducements from parties on whose goods they can rely. Pumps are made of poplar, and the stock should be sawed in sizes from three end one-half inches square to eight inches square, and from 12 to 16 feet long. The stuff must be clear, containing no knots (except, perhaps, some small, absolutely sound ones) shakes, worm holes, nor sap that will not turn off. The logs, so called, should be sawed square and of uniform size from end to end, Parties sawing poplar for this trade should not saw very much of one size. The dimensions used are 3½, 4, 4½, 5, 6, 7, and 8 inches; of these, 4, 6 and 7 inches square can be called the standard sizes, So it will be seen that the manufacturer who should devote himself to sawing 3½-inch logs would have difficulty in disposing of his product. Prices for logs range about as quoted under our hardwood market report. The range at present can be put from $24 to $26 per thousand feet, board measure, with not much certainty, however, as to the exact figures.

A recent report from the president of the Wooden Pump Manufacturers' Association of the United States, contains a table of production for ten years past. According to that table, the number of wooden pumps manufactured annually in the United States varies from 100,000 to 200,000, the latter figure being reached in 1881. The amount of wood in a pump is, on an average, from 40 to 50 feet; so that we can estimate the amount of poplar going into consumption in this line, as from 8,000,000 to 10,000,000 feet per year. It will be seen that the field for operation is this direction is not a large one, and it is hinted that some companies who have invested in boring machinery are getting very sick of their undertaking.

There is one way, however, in which bored pump log manufacture might be made to pay, and that is to combine it with manufacture of wooden pipes for water mains. Probably but few not directly interested in such matters have any idea of how many towns and cities use wooden pumps in their water systems. In large cities its use has not proved profitable, but in places of 10,000 inhabitants, and under, and where no great increase is anticipated, wooden pipes can be laid to advantage; and scores of such towns are using them. Even in such a city as Grand Rapids, Mich., wooden pipes have given satisfaction.—*Northwestern Lumberman.*

AMERICAN FORESTRY CONGRESS.

The American Forestry Congress held its annual session at Washington, D. C., May 7 and 8. Papers were read by Messrs. F. T. Baker, of Topeka, Kan.; D. E. Fernaw, of New York, and N. H. Eggleston, of Washington, on "The value and management of Government timber lands." It was the general judgement, as elicited in discussion, that a distinction should be made between government timber and agricultural lands, and that the laws should be so amended as to secure thi result more fully than now. Timber lands should be withdrawn from settlement or public disposal. A paper was read by Mr. C. M. Read, of Hudson, Ohio, on the preservation of forests on the head waters of streams, which, the report said, was received with marked attention, and was warmly commended. Mr. John S. Hicks read a paper on the planting of trees by railroad companies, in which he estimated the cost of ties per mile of road to be $924 every seven years, or a total per annum of $14,916,000 for the 113,000 miles of railway in the United States. To supply the timber to make the ties it would require 12,672,000 acres of woodland kept in constant growth, or 113 3-10 acres per mile of single track road. This is exclusive of sidings. It would require a belt of growing timber one-half a mile wide along every road to supply the line with trees. All places owned by the railroad companies where trees could be grown should be planted, thus giving protection from wind storms and furnishing timber for ties. A committee reported favorable on experimental forestry schools sustained by government. President Loring delivered the closing address, urging action on the part of congress in the direction of preserving the forests. The next session will be held at Saratoga, probably in September.

Canadian Timber in British Markets.

LIVERPOOL, May 1.—The arrivals from British North America during the past month have been two vessels, 906 tons, against none during the corresponding month last year, and the agregate tonnage from this date to all places in the years 1882-83, and 1884 has been 59,387, 45,016, 47,540 tons respectively. The import has been nominal, and the deliveries during the month have been generally satisfactory; prices, however, do not improve, and stocks are sufficiently large to meet ordinary requirements until spring shipments come forward, which is very desirable should be on a moderate scale until the tone the market has improved.

The deliveries of yellow pine timber has been double last year's during like month, but stocks are still heavy and price dull. Red pine, elm, and ash: sales have been nominal, and no change in value except as regards elm, which is dearer. Oak: there has been a large consumption, chiefly oak wagon scantling, and prices are a shade easier. Pine deals have moved off more freely; the better qualities maintain their value, but the stock consists almost entirely of thirds,

the prices of which are slightly lower. Staves are heavy in stock and prices lower.

The consumption of New Brunswick and Nova Scotia spruce and pine deals has been about an average for this time of year, but the stock is considerably in excess of last year's. There have been on arrivals, the late shipments from St. John having nearly all been diverted to other ports, otherwise there must have been a further decline here on the low prices now ruling; our market is weak, and it is very important that imports should be moderate for some time to come. Lower Port pine deals are low in value and seldom asked for. Birch continues in good demand, and prices are well maintained.—*Farnworth and Jardine.*

SUBSTITUTE FOR MATCHES.

Countless accidents, as every one knows, arise from the use of matches. To obtain light without employing them, and so without danger of setting fire to things, an ingenious contrivance is now used by all the watchmen of paris in all the magazines where explosives or inflammable materials are kept. Any one may easily make a trial of it. Take an oblong vial of the whitest and clearest glass and put into it a piece of phosphorus about the size of a pea. Pour some olive oil, heated to the boiling point, upon the phosphorus fill the vial about one third full and cork it tightly. To use this novel light remove the cork, allow the air to enter the vial and than recork it. This empty space in the vial will become luminous, and the light obtained is equal to that of a lamp. When the light grows dim its power can be increased by taking out the cork and allowing a fresh supply of air to enter the vial. In winter it is sometimes necessary to heat the vial between the hands, in order to increase the fluidity of the oil. The apparatus thus made may be used six months—*Builders' Journal.*

A Remarkable Slab.

The London *Timber Trades Journal* says:—We have had our attention called to a most remarkable slab of wood lying at Messrs. Hol & Sons' cabinet factory, Ebury Street, which we at first supposed to be African mahogany, but have since learned is from the Island of Borneo, in the China Seas. It was cut by the natives by means of small hatchets only, was found in the exterior jungles, where other similar logs are known to be, it strongly resembles African mahogany in color and texture, is of straight growth, remarkably hard, and consequently of great weight, and measures no less than 12 feet across. Admiral the Hon. Sir Henry Keppel informs us it was given to him by the Rajah of Sarawak, and he further states that, "being at the time in command of a line of battle ship, the Rodway, I had, of course, not much difficulty in bringing it home." We understand it is now the property of H. R. H. the Prince of Wales, who has instructed Messrs. Holland & Sons to convert it into a table top. Undoubtedly this will be an object of great interest to many.

Planking Portage Avenue.

The property owners on Portage avenue are interesting themselves in planking that thoroughfare, and Mr. G. B. Spencer interviewed the Board of Works asking that the avenue be planked with four inch oak plank, for a width of 33 feet on each side of the street, leaving a portion of the centre unplanked. The city engineer estimated that the cost would be $1.40 per square yard, making a total of $16,000 between Maine and Hargrave streets, of which the frontage owners were willing to pay half, the payment to extend over a term of years.

A Heavy Contract.

J. E. Loxley has recently made a contract with the Calcasieu Lumber Company, St Charles, La., to cut and deliver at the mill of the company 200,000,000 feet of logs. He wil deliver 20,000,000 feet yearly. The logs will be hauled to the Calcasieu river a distance of from three to eight miles, by rail, rafted and run down a distance of about 30 miles to the mill. This company is composed of Saginaw, Bay City and Detroit capitalists, N. B. Bradley, of Bay City, is president of the company.

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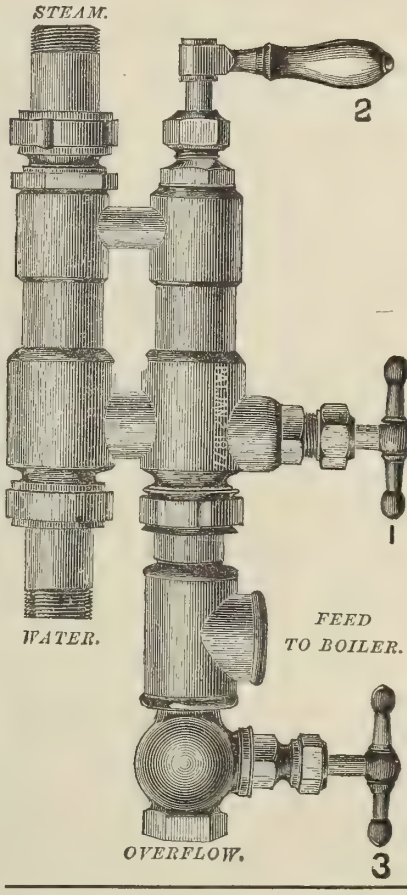
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FORESTRY.

The following paper was read by Dr. Franklin B. Hough, of Lowville, N. Y., at the American Forestry Congress held at St. Paul, Minnesota, and reported to the Ontario Fruit Growers' Association :

Using the term "education" in its broadest sense, as the imparting of knowledge in any mode or form, and assuming that knowledge is indispensable to success in any pursuit in life, we may be allowed to consider some of the means by which instruction can best be given in matters relating to forestry, in order to secure the greatest advantages to the greatest number who may have occasion and opportunity to apply this knowledge.

The special schools of forestry in Europe are, in some instances, elementary, and almost wholly practical in their character, and are intended for no higher purpose than to prepare young men to serve as foremen of working parties, and as forest guards. They are expected to know when the work entrusted to their care is well done; to see there is no needless waste of material or of time; and if the work is done by a contractor, but subject to their inspection, they are expected to know whether the terms of the contract are faithfully observed. They must be taught the protection of game, and the prevention of tresspass and spoilage, in whatever form it may be attempted, and must understand enough of the first principles of administrative law to draft a formal complaint as the first step in a prosecution, whenever this may become necessary within the district under their charge. It is only in extraordinary cases that persons thus trained find opportunities for advancement, and they reach the highest point of their ambition when they have done their work well.

But the schools for technical instruction in forestry, of which we find some thirty or more under the patronage of govenment, in various countries in Europe, have a much higher mission. They take their students after they have finished a course of study in the public schools, and sometimes besides this after they have had a period of actual service in forest labors, under skilled direction, and they endeavor, with this beginning to impart a course of theoretical and practical education that is carefully adapted to meet the future wants of the forest officer in every grade of the service, and quite as special and technical in its nature as in our naval and in our military academies. When this course is completed they are not always sure of immediate appointment, but must wait for a vacancy in the service. The place once secured, there is great certainty of its permanence, and a reasonable prospect of advancement as circumstances may favor, or talent may deserve.

I have thus briefly sketched the object and the motives that lie at the foundation of forestry education in Europe. They apply to countries having large tracts of woodland, in charge of a government or belonging to great hereditary estates, and they are carefully and well devised to meet the wants of these countries, by preparing skilled agents for the management of the interests concerned.

With us, a difference of laws, and in the tenure and inheritance of property, and the perfect freedom to every owner of land in the management of his own estate, must necessarily occasion a wide departure from these methods special education in its relations to forestry, in order to adapt it to the wants and requirements as they exist among us. I will therefore invite your thoughts to certain points to be considered in connection with forestry education in our own country, and inquire as to the duties that may arise in providing the kind and degree of instruction that will be of greatest practical service.

And first we may remark, that we do not for the present, and perhaps for many years to come, require a class of persons who have been specially trained to the degree that is deemed necessary in the better class of forest schools in Europe, because such persons could not find employment either in charge of public or private forests at the present time. In a journey through Europe and in visiting many of these schools in 1881, I made enquiries about students from America, and so far as I could learn there had been but one from their first beginning, and this one had but recently entered at Thavand. Of the very few graduates who come to America, every one has, I believe, been obliged to seek other employments; and upon quite a number of occasions in which students or recent graduates have asked my advice about the opportunities for professional employment in America, I have in every case discouraged them from coming, unless prepared to seek some other pursuit than systematic forestry. A time may come when it will be desirable to seek for men well versed in science, who are capable to conduct series of observations at an experimental station, or to manage the forests upon the public domain, should they be put under regular management, as I have urged in my reports, but that time is not yet.

I am well aware that this measure of the establishment of special schools of forestry has been urged upon Congress, and that St. Paul has been mentioned as a proper place for its location. It certainly might as well be there as anywhere. But let me enquire: Where would the graduates, if trained to the highest degree and fitted to accomplish all that those can who leave these schools in Europe, be able to find employment? Neither the general nor the state governments have any system of forest management needing their services. There may be a few railroad companies who would employ one, but this is not certain, and as to private estates, I know of none upon which such a person would be likely to find an engagement. A time may come when this want may arise, but it has not yet arrived.

Should experimental stations come to be established, they should of course have men of the highest qualifications; and they would need a considerable amount of hand labor. In this, preference might be give to young men wishing to acquire skill in planting, and thus these places might become in time the nuclei of schools of practical forestry, but these to belong to the future. Let us then return back to the present, and consider what are the existing needs of the country in the matter of forestry education, and how they can best be supplied.

If we do not need a high degree of special training for a few, we certainly do need a certain amount of instruction of a practical kind for a greater number. We can altogether dispense with the whole of what is taught in the forest schools of Europe, upon the jurisprudence and the administration of forest codes, and the adjustments of rights of common usage. We can leave out what they teach concerning the protection of game. There is a great deal taught concerning "*amenagement*," that is, the the working of a forest through a future given period, upon plans first carefully studied, and which, when once adopted, must be observed to the end, which do not find application in American forestry. There are studies in topography and engineering, drawing of maps, construction of reservoirs, dams, and various hydraulic operations, including leveling for drainage, the building of saw mills and the like, which, however useful, do not necessarily require more than is now taught in our best institutions in courses of study already in operation.

Let us now come to consider what we do want, and how this want can be best supplied, and in this we will begin at the lowest and broadest stage of education, with what our children should learn in their families and in the common schools.

They should be impressed with the idea that the woodlands are not less useful to human welfare than the cultivated fields; and that like them they should be protected from injury or waste, as well from fires as from other causes. They should be made to understand that the birds nesting in our groves are, almost without exception, our friends, and therefore entitled to protection. Under a competent teacher they can be interested in little schemes of planting and rural adornment around the schoolhouse and at home, and this without the formalities of a lesson from books, or under the semblance of a task imposed upon the unwilling, but rather as a reward of merit. These first ideas so easily instilled into the minds of children, leave the most durable impression, and remain through afterlife, at least in the way of pleasant recollections of happy hours, and they may and should create a sympathy with nature that the hard realities of life can never wholly efface.

A skillful and competent teacher might now and then by way of pastime, require the scholars to bring in specimens of woods, and leaves, and flowers, and fruits, and ask them to tell all they knew or could find out about them. The uses of things might be explained, and some idea of the order and harmony of nature thus imparted might awaken observation, and a habit of inquiry, and a desire for knowledge, that might of otherwise lain dormant. An hour or two in a week devoted to this kind of teaching by object lessons, would bring about the best results, and the school boards could well afford to pay something above the current wages to the teacher who could do it well.

This simple and elementary instruction might not go far in the way of education in forestry, but it would be a good beginning, as far as it did go it would be in the right direction. In mountain rills the source may be small, and a feeble obstruction may give the first direction to the stream that finally becomes the river. It would at least impart some knowledge of the names of things, and impress the truth that every part of a created object has its uses, and that nothing is formed in vain.

We have been obliged, in speaking of the teachers of our primary schools, to use the words "skilful and competent," preceded by an "if," because it is painfully evident that they do not apply to them all. And this leads us directly to the next point we have to consider, namely: That our Normal schools, where these teachers are prepared, do not as yet afford that instruction upon these subjects, that should impart that skill and competence that we need. There should be introduced in the way of classroom recitations, or by lectures, or otherwise, a little practical instruction upon the ways by which the children of a common school may be interested in these habits of observation and inquiry, and instructed in the rudiments of knowledge about the productions of nature which are around them. This is done already to some extent in various normal schools, and it might be done with profit and to a further extent in them all.

The cabinets of these normal schools, should contain specimens of woods, and of the leaves, blossoms, and fruits, and the students might be be exercised in distinguishing the different species by the bark the wood and the general habit of growth, of the trees of common occurrence around them. The grounds of such institutions should have labelled specimens of living trees, grouped in their natural relations, and in as great a variety as their extent, and the soil and climate would permit. Some correct ideas might also be imparted, as to the time and method of planting, the requirements of particular kinds of trees, and the like, and the classes of young men might be taught in a practical way, some of the first lessons in forest economy that are most useful in after life, or that might be imparted when they go forth to teach. In these lessons, instruction might be given as to some of the relations that exist between forests and the climate, the incidental benefits conferred by woodlands upon agriculture, and some of the economies that may be practised in the planting and care of trees.

Our high schools and academies might in like manner and to an equal or greater extent, impart instruction upon things useful to be known, and with the very best effect. Under zealous and competent teachers the students might be interested in the formation of collections of various kinds, and be taken occasionally upon little excursions into the woodlands, where opportunities for practical instruction are afforded on every hand. This method of education by means of excursions under the guidance of teachers, which is quite common in certain schools in Europe, and is a prominent one in all schools of forestry, should be more generally practised among us, and no summer term should pass in these institutions without one or more of them being had.

In the various grades of schools that have been noticed, an arbor day should never be allowed to pass without being duly celebrated, with ample preparations beforehand, and it would add not a little to the interest in the custom, if the care and protection of particular trees were assigned to particular ones of the number, who would be expected to give their charge all needful attention by watering in a dry time, through the first season, and by such further attention as their wants might require.

In the various grades of instruction, suitable prizes might be offered for proficiency and merit, and the best results shown in a county or a state, should be rewarded by distinguished mention in the official reports.

Passing from these institutions of the middle class, to those of higher grade, we come to the colleges and universities of the country. Some of these from their location, or on account of their special object, may offer no opportunity for instruction in forestry in any form; but with much the greater number, more or less might be done, without burdening the course of study as already prescribed, or requiring more time than is now allowed.

In the course of instruction in chemistry, botany, natural history, physics, mathematics, meteorology and the like, the application of these sciences to questions in forestry might be noticed, as opportunity occurred. A course of lessons in the class-room might be prescribed as is already done in some of our colleges, as at Dartmouth, and in the Michigan University. The remarks already made concerning collections for the cabinet, and a labeled arboretum, might apply on a more extended plan, corresponding with the more enlarged field of operation and greater opportunity; and no class should graduate without hearing at least one course of a dozen lectures by a person thoroughly qualified for presenting a concise general outline of the whole subject of forestry.

I have thus briefly presented the leading features which I think might be grafted upon our existing system of education, without creating new institutions, or much enlarge the operation of existing agencies. The plan I propose would embrace the whole country, and include in its operation every person who is to become in a few years the owner of the lands upon which our forests must in future be grown. It is no doubt imperfect, but it would be a fair beginning, and its details could be modified from time to time, as experience might suggest. It applies chiefly to the young, but this is the class that learns. It is often said, and there is too much truth in the saying, that a man in middle life or in old age can learn nothing. But these men are passing away, and our greatest hope depends upon our ability to prepare those who are to come after them, to discharge their whole duties, as well in this as in every thing, in such a manner as to do full justice to themselves as to the commonwealth whereof they form a part.

IN A LOGGING CAMP.

Bill Nye, who now lives in Hudson, Wis., visited a logging camp and writes of it as follows to the Denver *Opinion* :

"I put up at Bootjack camp, on the raging Willow river, where the gay plumaged chipmonk and the spruce gum have their home.

Winter in the pine woods is fraught with fun and frolic. It is more fraught with fatigue than funds, however. This winter a man in the Michigan and Wisconsin lumber camps could arise at 4:30 a. m., eat a patent pailful of dried apples soaked with Young Hyson and sweetened with Persian glucose, go out to the timber with a lantern, hew down the giants of the forest with snow up to the pit of his stomach, till the grey owl in the gathering gloom whooped and hooted in derision, and all for $12 per month and stewed prunes. I did not try to accumulate wealth while I was in camp. I just allowed others to enter into the mad rush and wrench a fortune from the hand of fate while I studied human nature and the cook. I had a good many pleasant days there, too. I read such literary works as I could find around the camp, and smoked the royal Havana smoking tobacco of the cookie. Those who have not lumbered much do not know much of true joy and sylvan smoking tobacco.

They are not using a very good grade of the weed in the lumber regions this winter. When I say lumber regions I do refer entirely to the

circumstances of a weak back. (Monkey wrench, oil-can and screw driver sent with this joke; also rules for working it in different kinds of goods.) The tobacco used by the pine whoppers of the northern forest is called the Scandihoovian. I do not know why they call it that, unless it is that you can smoke it in Wisconsin and smell it in Scandihoovia.

When night came we would gather around the blazing fire and talk over old times and smoke this tobacco. I smoked it until last week; then I bought a new mouth and resolved to lead a different life. I shall never forget the evenings we spent together in that log shack in the heart of the forest. They are graven on my memory where time's effacing fingers cannot monkey with them. We would always converse The crew talked the Norwegian language, and I am using the English language mostly this winter. So each enjoyed himself in his own quiet way. This seemed to throw the Norwegians a good deal together. It also threw me a good deal together. The Scandinavians soon learn our ways and our language, but prior to that they are quite clannish.

The cook, however, was an Ohio man. He spoke the Sandusky dialect with a rich, nut-brown flavor that did me much good, so that after I had talked with the crew a few hours in English and received their harsh, corduroy replies in Norske, I gladly fled to the cook shanty. There I could rapidly change to the smoothly flowing sentences peculiar to the Ohio tongue, and while I eat the common twisted doughnut of commerce we would talk on and on of the pleasant days we had spent in our own native land. I talked to him of his old home till the tears would unbidden start, as he rolled out the dough with a common Budweiser beer bottle and shed the scalding tears into the flour barrel. Tears are always unavailing, but sometimes I think they are more so when they are shed into a barrel of flour. He was an easy weeper. He would shed tears on the slightest provocation or anything else. Once I told him something so touchful that his eyes were blinded with tears for the nonce. Then I took a pie and stole away so that he could be alone with his sorrow.

He used to grind the coffee at 2 a. m. The coffee mill was nailed up against a partition on the opposite side from my bed. That is one reason that I did not stay any longer at the camp. It takes about an hour to grind coffee enough for thirty men, and, as my ear was generally against the pine boards when the cook began, it ruffled my slumbers and made me a morose man.

We had three men at the camp who snored. If they had snored in my own language I could have endured it, but it was entirely unintelligible to me as it was. Still it wasn't bad, either. They snored on different keys, and still there was harmony in it—a kind of chime of imported snore, as it were. I used to lie and listen to it for hours. Then the cook would begin his coffee mill overture, and I would arise. When I got home I slept from Monday morning till Washington's birthday, without food or water."

Planting Evergreens.

Mr. W. D. Boynton communicates to the *American Garden* an article on planting evergreens, which should interest a great many persons, for there are but few varieties of trees which are more beautiful than groups of balsams, pines, and firs, and they are the most likely to thrive after transplanting.

As to the season for transplanting, says Mr. Boynton, either fall or spring is good. The *when* is not so important as the *how*. I lean a little toward the spring planting however, as the ground is then more moist, and no other vegetation in the way about the roots and stems to obstruct the work of taking up the young trees.

My first and main precaution is to secure the body of mould immediately around the tree that contains most of the feeding roots in a tree of small growth. I have this lifted out carefully with the tree in the center, as little disturbed as possible, and then wrap coarse sacking about the whole, drawing it up around the trunk and tying firmly. In this shape they can be loaded into a wagon box that has a thick layer of straw in the bottom, and taken home. They should be set out at once, watered, and staked.

The reader will understand that this way of taking up can only be practiced on short distances, where the trees can be taken home and set out in a few hours at the most. If they are to be shipped, the mould must be detached, and moss worked in among the roots and bound around them. Even here I hold to the idea of wrapping coarse sacking around the whole, and fastening around the stem. The whole mass is then moistened, after which treatment they will stand quite a journey and come out in good condition.

If the planter finds that the roots are at all dried up when he comes to set them out, the tree may as well be pitched into the bush heap at once, for it will sooner or later find its way there. Never use manure of any kind around the roots of a young evergreen tree. Vegetable mould is good, but they do not need a rich soil. They should always be staked firmly, for they offer a thick top to the wind, and if twisted about, the roots cannot get a hold.

The Railways of the World.

The United States in 1882 had 104,810 miles of railway open, which was only 4,500 miles less than all the railways of Europe. The railways of the United Kingdom, although their aggregate mileage in 1882 was but 88,405 carried 752,000,000 passengers and 256,000,000 tons of freight, as compared with 270,000,000 passengers and 290,000,000 tons of freight carried by our railways. The cost of our roads in round numbers was estimated in 1880 at $5,200,000,000, as against $3,600,000,000 for the cost of British railway, but the gross receipts of the former were double those of the latter, and the dividend on capital, 4.80 per cent., was larger than in any other country. In Europe the average was 3.80, and the range was from 2.10 in Denmark to 4.21 in Germany. The capital employed in the railways of the United States is nearly equal to that of the British and French railways combined. On our railways, the number of passengers killed and wounded by accidents was 41.1 per 1,000,000, as compared with 10.8 per 1,000,000 in Europe. The number of employees per mile is with us 5, and in Great Britain 15. The railway capital per mile of railway is $209,000 in the United Kingdom, and $57,000 in the United States. The ratio of railway capital to the national wealth is 8.8 in Great Britain and 11.4 in the United States. The highest railway in the world is the Lima Aroya line in the Andies, which runs at an elevation of 15,840 feet.

Hamilton Notes.

The correspondent of the Toronto *Globe* says:—The timber trade at Hamilton is much smaller than last season. McArthur Bros. and McRae are doing very little at this port, and Mr. Murphy, of Quebec, is shipping instead of rafting. Flatt & Bradley are rafting, but not to such an extent as last year. The rate from this port to Garden Island or Collins' Bay is $22, which is about $13 less than what used to be considered a fair figure. The low rates are a result of the fierce competition of the railroads with the vessels. One timber merchant says that the railroads offered to carry his timber from where it was cut up north to Quebec for very little more than it cost to raft it and send it by the lake and river.

First of the Season.

Robert Ralston, an old-time Winnipegger, but now of Emerson, has arrived from the Gateway City with several rafts containing 100,000 feet of oak logs for Brown & Rutherford. He states that this is the first arrival of the season and that the rafts floated down the Red, without any trouble. He has several more to bring to the city during the summer.

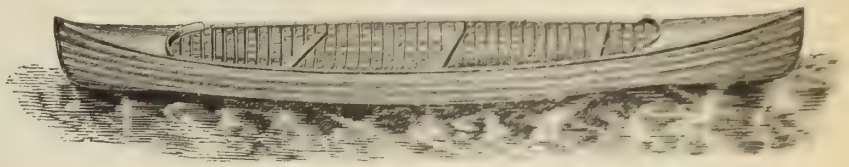
In a cargo of lumber lately shipped from Saginaw to Cleveland, O., were three pine pieces that were a portion of an exhibit at the Philadelphia Centennial, made by Geo. G. Williams & Bro,, of Saginaw City. One piece was six, and two four inches in thickness, and all 41 inches wide and 16 feet long. They go to Cleveland as a gift to the Diamond Match Company.

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Canoes for Lumbermen, designed to carry any amount of goods and chattels and strongly built, made to order on short notice.

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HUGH GIBSON, ESQ.,—Your Patent Excelsior Mill Dogs give entire satisfaction, and is certainly up to your recommendation. They are the best Mill Dog in the market. I am very much pleased with them.

Yours Respectfully,
PETER McLAREN.

BERKLEY, April 20th, 1883.

HUGH GIBSON,—SIR,—The Dogs I bought of you give satisfaction. They beat any Dog that I ever saw for ripping or edging lumber on carriages. They are just the thing for scantling. I would not take $50 for them to-day and have to wait for another pair to come from you, because I believe they make two dollars a day for me.

Yours truly,
GEO. S. BROWN, JR.

2L1y



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6L8

Market Reports.

MONTREAL.

From Our Own Correspondent.

MAY 24.—The lumber trade has been improving, but not so freely as in past seasons. The consumptive demand has been fair and prices steady. Dealers, however, are chary about increasing their stocks much in the meantime. Laths are cheaper owing to new stocks coming in. We quote prices as follows ex yard :

Pine, 1st quality, ₱ M	$35 00@40 00
P ne, 2nd " ₱ M	22 00@24 00
Pine, shipping culls, ₱ M	14 00@16 00
Pine, 4th quality deals, ₱ M	11 00@12 00
Pine, mill culls, ₱ M	10 00@12 00
Spruce, ₱ M	10 00@13 00
Hemlock, ₱ M	9 00@10 00
Ash, run of log culls out, ₱ M	20 00@25 00
Bass, " " ₱ M	17 00@20 00
Oak, ₱ M	40 00@50 00
Walnut ₱ M	60 00 100 00
Cherry, ₱ M	60 00@80 00
Butternut, ₱ M	35 00@40 00
Birch, ₱ M	20 00@25 00
Hard Maple, ₱ M	25 00@30 00
Lath, ₱ M	1 75@ 0 00
Shingles, 1st, ₱ M	3 00@ 0 00
Shingles, 2nd, ₱ M	2 50@ 0 00

SHIPPING.

The shipment of deals has been fair for the season and every steamship is taking her share mostly to English ports, and engagements are still making at the following rates : To Glasgow 40s. ; to Avonmouth, 45s. ; to Liverpool, 50s. ; to London, 50s. ; to the River Platte by sailing vessels $13 to $13 to $14. The first vessel laid on for the latter destination is the Bk. Cambridge which will begin loading as soon as her inward cargo is discharged. The following are the shipments recorded at the Custom House since the opening of navigation up to date : SS. Montreal, to Liverpool, 13,724 deals ; SS. Lake Champlain, to Liverpool, 6,607 deals ; SS. Austrain, to Glasgow, 7,506 deals ; Schooner Berneir, St. John, Nfld., 75,000 feet lumber ; SS. Sarmatian, Liverpool, 15,402 pcs. boards ; SS. Lake Huron, Liverpool, 5,889 pcs. deals ; SS. Sarnia, Liverpool, 22,532 pcs. deals ; SS. Titania, Glasgow, 3,217 pcs. deals and 125,000 feet lumber ; SS. Parthian, London, 9,978 pcs. deals ; SS. Barcelona, London, 9.978 pcs. deals ; SS. Milanese, Liverpool, 14,104 pcs. deals, 100 deal ends and 10,180 boards ; SS. Texas, Liverpool, 6,322 deals ; SS. Glocester, Avonmouth, 10,511 deals.

CORDWOOD.

Now that navigation is fairly open and the supply beyond the demand wholesale dealers have lowered their prices, but even with the reduction the demand is slow, as the retail dealers are doing next to nothing. We quote ex cartage at the wharves as follows :—

Long Maple	$ 6 00
Long Birch	5 50
Long Beech	5 00
Tamarack	4 50

LIVERPOOL MARKETS.

Our latest advices state that imports have been on a very moderate scale, while a fair consumption has been maintained though prices generally rule low. A private sale of a cargo of spruce deals from St. John, N. B., per steamer took place, but prices have not transpired, but the wholesale quotation iu the market was £6 12s. to £6 15s.

TORONTO.

From Our Own Corresponden!

MAY 24.—There is no alteration worthy of note in the condition of the lumber market, all the yards have a fair run of trade and prices remain about the same. A large amount of building is going on in various parts of the city, and the longer length of bill lumber is in good demand with only a limited supply. All other kinds except 1½ in. and 2 in. cut up and pick to dry are plentiful ; the demand for the latter is far in excess of the supply, especially as regards car load lots.

Over our docks shipments continue fair, although not rushing, about the same quantity has been shipped, as noted in my last letter. During the last two weeks the grades of lumber passing over the rail of vessels has been considerably better than that shipped the two weeks preceding, and most of the dry lumber held over from last season has now left the mills, so that this season's cut is all that can be depended on for future shipments. It is true there may be small lots at some of the smaller mills yet to come forward, still, the quantity will be so small as hardly to be worth taking into account, when compared with the sum total brought to this port. The remainder of this season's business will now depend upon the demand from the other side the lake. It is now fully understood that there is a large shortage in the log crop, but unless we have a brisker demand there will be quite sufficient lumber to more than meet the wants of the trade.

Considerable dissatisfaction is just now existing between wholesale dealers and their western customers, by reason of the bungling manner in which the railway companies have performed, or rather neglected to carry out, their contracts at special rates to various points in Western Ontario. So that dealers who have bought at fixed prices f.o.b. cars at the mills have found that instead of a 10 or 12 cent rate, as guaranteed them by the seller, they have had to pay 16 and 17 cents before obtaining possession of their lumber, and they naturally accuse the seller of trying to play sharp, whereas the fault is with the railway companies in neglecting to inform their agents with regard to such special contracts.

The N. & N. W. Railway Company have appointed Mr. Robt. Quinn, late local freight agent here, to the position of general freight and passenger agent, this appointment gives general satisfaction, and if the general manager will only grant him full powers nothing but good will can exist between the company and their customers in the future.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
Scantling and joist, up to 16 ft	13 50
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 00
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	20 00
" " " 32 ft	21 00
" " " 34 ft	22 50@22 50
" " " 36 ft	24 00
" " " 38 ft	27 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	24 00
" boards "	20 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 00
Three uppers, Am. inspection	35 00@40 00

B. M.

1¼-inch flooring, dressed	30 00
1¼ " " rough	16 00
1¼ " " dressed	25 00
1¼ " " undressed	15 00@15 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ₱ M	2 90
Sawn Lath	2 75

BOSTON.

Cotton, Wool and Iron of May 24, says :—There is a very fair business doing, as the season becomes settled for building operations. On general lumber prices are quite well sustained, and receipts are pretty light. Eastern lumber is in good request, with small arrivals. Hemlock boards are in small supply, as are also lath. Southern pine continues very quiet with timber orders scarce and low, and only the better grades of flooring in fair request. Western pine is selling along well at steady prices, especially the better grades. Cherry and walnut of desirable quality afso find a ready market. Whitewood is in good request, while ash and oak are rather dull.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

WINNIPEG.

The Winnipeg *Commercial* of May 20th says : There has been considerable life in the lumber business during the past week, and matters have reached a most satisfactory basis. There is some talk of the mills in the city resuming work very soon, as arrangements have been made to do away with at least a large share of the indiscriminate cutting of prices that has been carried on for months past ; the arrangement is not sufficiently definite to allow of quotations being given that could be taken as a reliable basis, but it is, doubtless, a step in the direction of reaching this, and it is to be hoped that further progress in that line will be speedily made. The outlook for the balance of the season is rather encouraging, and with a further improvement in trade generally the season may yet turn out a profitable one to lumbermen.

Pine lumber, 1st, common boards, dressed	$26 50
do, 2nd, dressed	25 50
do, 1st dressed rough	26 50
do, 2nd do.	25 50
Sheating, rough	25 00
Timber 16 feet and under	24 00
do. over 16 feet, for each additional 2 feet.	1 00
Dimension and joists 16 feet and under	24 00
do, do, over 16 feet for each	1 00
Fencing	25 00
2 and 3 in. battens	30 00
A. stock boards, all widths	50 00
B. do. do.	45 00
C. do. do.	40 00
D. do. do.	35 00
1st clear, 1, 1½, 1¾, and 2 inch	60 00
2nd do. do. do.	56 00
Window and door casings	50 00
Base boards, dressed	50 00
1st pine flooring, siding and ceiling	40 00
2nd do. do. do.	35 00
3rd do. do. do.	30 00
½ inch split siding, dressed	30 00
Spruce lumber—timber 16 feet and under	22 00
do. over 16 feet for each additional 2 feet	1 00
Dimension and joists, 16 feet and under	23 00
do do. over 16 feet, for each additional 2 feet	1 00
Boards	22 00
1st flooring, siding and ceiling,	28 00
XX shingles	5 25
Star A shingles	5 25
X shingles	5 00
A. do.	4 50
Lath	4 50

ALBANY.

Quotations at the yards are as follows :—

Pine, clear, ₱ M	$53 00@58 00
Pine, fourths	53 00@58 00
Pine, selects	53 00@58 00
Pine, good box	22 00@33 00
Pine, 10-in. plank, each	00 42@00 46
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in.	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 21
Pine, 10-in. boards, 16 ft., ₱ M	28 00@32 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	16 00@18 00
Pine, 1-in. siding, select	43 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 32
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ₱ M	40 00@43 00
Ash, second quality, ₱ M	25 00@30 00
Cherry, good, ₱ M	60 00@85 00
Cherry, common, ₱ M	25 00@35 00
Oak, good, ₱ M	40 00@43 00
Oak, second quality, ₱ M	20 00@25 00
Basswood, ₱ M	25 00@30 00
Hickory, ₱ M	40 00@40 00
Maple, Canada, ₱ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ₱ M	38 00@40 00
Shingles, shaved, pine, ₱ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 4 75
" clear, "	0 00@ 3 25
" cedar, mixed	0 00@ 3 50
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ₱ M	0 00@ 2 75
Lath, spruce, "	0 00@ 3 00

BUFFALO.

We quote cargo lots :—

Uppers	$46 00@48 00
Common	18 00@25 00
Culls	12 00@14 00

CHICAGO.

The *Northwestern Lumberman* of May 24, says :—With the exception of some yards in the farther West, stocks are not excessive, and at many points they are decidedly low. It is true that there is considerable lumber yet to come forward, but both wholesale and retail stocks in the Northwest are much depleted and broken. This fact is evinced by the rate at which the dry supplies in Saginaw Valley have been absorbed, and the rapidity with which they are disposed of on the east shore of Lake Michigan. It is now asserted that there is little in either section that has not been sold outright or spoken for. Much of fhe Saginaw lumber is yet on the way to the East, and has yet to go into distribution from Albany and other points. Canada stock is beginning also to flow into the eastern States. But judging by reports, the supply in the distributing yards will have become so reduced before the incoming western and Canadian lumber reaches Albany, and is scattered thence into the retail yards, that it is thought the supply will not so much exceed the demand as as to weaken prices.

The number of port arrivals for the week ended Wednesday night, May 21, was 231 against 178 the week previous, and 172 for the corresponding week last year. Up to date, since the opening of navigation. judging by the number of cargoes reaching this port, receipts of lumber are considerably in excess of a relative time in 1883, though there is less green lumber coming this year than last.

Lake freights are reported by the vessel agents as firm and unchanged.

Quotations on lumber, so far as a market price has been made, are as follows :—

Dimension, green	$ 9 00@ 9 50
Boards and strips—No. 2	10 50@13 00
Boards and strips—Medium	14 00@15 00
Boards and strips—No. 1	15 00@20 00
Shingles, standard	1 90@ 2 00
Shingles, extra	2 15@ 2 25
Lath	1 70@ 1 80

It is claimed by the yard merchants that, though stocks are becoming low, there is plenty of all kinds of lumber to be had at easy prices. This, no doubt, is owing to the fact that receipts of dry lumber have really been heavy since the opening of navigation, and though the bulk has gone into the great yards, it is to be had by anybody at moderate figures.

Receipts of lumber, shingles, etc., for the week ending May 8, as reported by the Lumberman's Exchange :—

	RECEIPTS. *Lumber.*	*Shingles.*
1884	57,133,000	32,349,000
1883	38,741,000	19,502,000

FROM JANUARY 1, 1884, TO MAY 8, 1884, INCLUSIVE.

	RECEIPTS. *Lumber.*	*Shingles.*
1884	198,423,000	82,254,000
1883	118,017,000	102,951,000
Increase	80,406,000	
Decrease		20,697,000

STOCK ON HAND MAY. 1.

	1884.	1883.	1882.
Lumber	289,216,785	300,731,016	294,244,311
Shingles	204,567,875	90,070,344	104,027,305
Lath	27,063,540	22,283,445	10,611,535
Pickets	1,003,416	842,291	1,827,993
Cedar posts	235,493	113,377	159,937

OSWEGO, N. Y.

Three uppers	$44 00@45 00
Pickings	34 00@35 00
Fine, common	20 00@24 00
Common	13 00@16 00
Culls	10 00@13 00
Mill run lots	14 00@18 00
Sidings, selected, 1 inch	30 00@35 00
1¼ inch	30 00@36 00
Mill run, 1x10, 12 inch	17 00@19 00
selected	22 00@26 00
Shippers	13 00@16 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " culls	10 00@12 00
1x6 selected for clapboards	22 00@35 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 00@ 3 50
XX pine shingles	2 30@ 2 50
Lath	2 00@ 2 25

TONAWANDA.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

LONDON.

The *Timber Trades Journal* of May 17th, says :—Whether the bottom of price has at length been reached is a matter of opinion, but if not they can hardly sink much lower ; at the same time the prospect of a very considerable rise by and by is a very fair one. The season seems to promise well for speculations, and the risk of any very serious loss, through a further decline in prices, would be more than counterbalanced by the likelihood of a substantial advance, were it not for the want of confidence that permeates the inmost recesses of the trade, which does more to retard business than anything else. What is the use of buying advantageously without there is a safe and ready sale for your purchases? It will be this want of confidence that will throw a great deal of stuff into the public sales, which, under other circumstances, would have been distributed in a private way.

At the "Baltic" this week values seemed in some respects better than they have been, but a choicer selection of goods doubtless gave to the prices their improved character. One with another we may put down things as stationary, with a somewhat better demand, which the fine spring like weather we are now experiencing doubtless leads up to.

LIVERPOOL.

The latest number of the *Timber Trades Journal* tells us that there is no cessation of the cry that business in the manufacturing districts is exceedingly dull, that there is no life in the trade, and that it is exceedingly difficult to wring out any orders from the consumers, and when this done it is done on the barest margin

of profits. In this condition of trade the timber market appears to be no worse off than other branches in the manufacturing districts if we may judge from the reports in the commercial papers.

The importation of spruce deals continues very small, and this should help off the accumulated stocks, which are too heavy for this time of year. Pitch pine has been arriving more freely, and several cargoes are now being landed; most of them, however, have been either contracted for or sold entire by private treaty. These vessels are giving the timber quays and docks a greater show of life than they have shown for some time past. The vessel which was in the disastrous collision with the steamer State of Florida turns out to be the Pomona, well known in the timber trade between Richibucto and Liverpool. A vessel is reported bottom up in the Atlantic, which may either be this vessel or a vessel laden with pitch pine for a neighboring port, which is now considered overdue.

GLASGOW.

The *Timber Trades Journal* of May 17th, says:—The imports for the past week include four cargoes of pitch pine; other arrivals are sundry parcels of whitewood, staves, &c., per steam liners.

As noted below, an auction sale was held at Greenock on 8th inst., the goods offered consisting of American timber and deals. Some good buyers were present, and over 600 logs of timber were disposed of at prices, which, on the whole, were fairly sustained. As to Quebec red pine, while there is a plentiful supply of pitch pine, which competes with it, the demand is weakened and prices depressed, especially so long as slackness continues in our shipyards.

There has been no auction held at Glasgow during the week.

Messrs. Wm. Connal & Co. announce a sale of mahogany and cedar for Tuesday first, 20th inst., at Yorkhill Wharf, Glasgow, to be followed by Messrs. Edmiston & Mitchells, who will offer birch timber, walnut and whitewood.

Deliveries from yards meantime continue to be quiet, but in the course of a few weeks the arrivals of fresh imports may be expected to revive an interest among buyers, who we hope by that time will have their hands filled with fresh orders. From the present state of the market a sparing import for the coming season is advisable.

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, May 20, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., N. W., Washington, D. C.:—

298,786.—Auger, H. L. Shaler, Deep River, Conn.

298,879.—Box covering and trimming machine—G. Munro, Troy, N, Y., assignor to American Box Machine Co., New York, N. Y.

298,765.—Cant-hook and lifting-jack combined—O. H. Mitchell, Springfield, Mo.

298,765.—Cant-hook or dog—A. Kennard, Clearfield, Pa.

298,979.—Clutch, friction—M. C. Johnson, assignor to Pratt & Whitney Company, Hartford, Conn.

299,096.—Oiling shaft-bearings, device for—T. Y. Winter, Philadelphia, Pa.

298,755.—Planing machine—L. Houston, Albion, N. Y.

298,886.—Saw—W. Peak' Peakville, N. Y.

298,995.—Saw clamp frame—A. McNiece, Newark, N. J.

298,743.—Saw filing machine, gin—A. P. Gathwright, assignor of one-half to W. C. Potts, Harmony Grove, Ga.

298,820.—Saw jointer—B. S. Bozard, Brooklyn, N. Y.

298,928.—Saw sharpening machine—D. Willey, Concord, N. H.

298,892.—Saw tooth, invertible—W. B. Risdon, assignor to American Saw Co., Trenton, N. J.

298,737.—Shingle-sawing machine—G. Earl, Pierson, Mich.

298,851.—Fiber, machine for converting wood into—J. H. Hayden and J. R. Sleeper, Bristol, N. H., assignor of one-third to C. R. Aldrich, Boston, Mass.

A PLEA FOR TREE PLANTING

The following article from the New York *Independent* will repay perusal, at this time:

"In every town and village something can be done to beautify and greatly improve the public grounds and highways. All that is necessary is for some one or more persons to start the wheels and unite in calling a meeting of the residents to discuss the matter. Let the ladies take hold in good earnest and start the movement. A village society once organized could do, in a very few years, an astonishing amount of work, with very little effort. One single day in a year devoted to village improvements would very soon change the whole appearance of any place. Such work is rapidly increasing in popularity. Mr. B. G. Northrop, of Connecticut, is now giving almost his whole time in lecturing on the subject of Rural Improvements.

What he said, in a recent address in Shelbyville, Indiana, is highly spoken of by the *Indianapolis Journal*. We copy from a recent report the following interesting points, given by Mr. Northrop on that occasion. His topic was 'Arbor Day.'

It may be objected to Arbor Day, or to any school lesson on forestry, that the course of study is already overcrowded. I reply that the requisite talks on trees, their value and beauty, need not occupy three hours, all told. Those talks on this subject, which Superintendent Peaseley says were the most interesting and profitable lessons the pupils of Cincinnati ever had in a single day, occupied only the morning of Arbor Day, the afternoon being given to the practical work. Such talk will lead our youth to admire our noble trees, and realize that they are the grandest products of nature, and form the finest drapery that adorns this earth in all lands. Thus taught, they will wish to plant and protect trees. This love of trees early implanted in the school and fostered in the home, will make our youth practical arborists.

Teachers can easily interest their pupils in adorning the school grounds. With proper pre-arrangement as to the selection and procuring of trees, vines or shrubs, Arbor Day may accomplish wonders. Many hands will make merry as well as light work. Such a holiday will be an attractive occasion of enjoyment and improvement. The parent should be persuaded to approve and patronize the plan. It tends to fraternize the people of a district, when they thus meet on common ground, and young and old work together for a common object, where all difference of rank or sect or party are forgotten. The plantings and improvements thus made will be sure to be protected. They will remain as silent, but effective teachers of the beautiful to all the pupils, gradually improving their taste and character. Such work done around the school naturally extends to the homes. You improve the homes by improving the schools as truly as you improve the schools by improving the homes.

Our youth should early share in such efforts for adorning the surroundings of their homes and planting trees by the wayside. How attractive our roads may become by long avenues of trees. This is beautifully illustrated in many countries of Europe. Growing on lands otherwise running to waste, such trees would yield ample returns. The shade and beauty would be grateful to the traveller, but doubly so to the planter. Having in abundance the best trees for the roadside, no class can contribute so much to the adornment of our public roads as the farmers. In portions of Germany, the land owner was formerly required to plant trees along his frontage. Happy would it be for us if our sovereigns of the soil would each make such a law for himself. When, in any community, each citizen is stimulated to make his own grounds and wayside neat and attractive, the entire town becomes so inviting as to give new value to its wealth and new attractions to its homes."

REVIEWS.

MANUAL FOR FURNITURE MEN.—The Industrial Publication Co. of 294 Broadway N. Y, has published a handy little volume of "Hints and Practical Information for Cabinet Makers Upholsterers and Furniture Men Generally." Many of the miscellaneous receipts (carefully indexed) will be found useful not only to workers in wood, but also in the household when minor repairs and renovations are required.

THE "VANCOUVER"

The Montreal *Star* says:—The new Dominion line steamship "Vancouver" arrived in port after her first trip across the Atlantic shortly after two o'clock on Monday. The new steamship, which is 5,700 tons register, 300 tons larger than the "Parisian," is built on very much the same lines as the "Sarnia" and "Oregon," of the same line. Like Lady Jane, the general appearance of the vessel is more massive than beautiful, display having been subordinated in the utmost degree to seaworthiness. She is built with a straight stern, is turtle-decked forward and aft, with a commodious promenade deck amidships, over the deck cabins, which, unlike those of the 'Parisian,' are extended to the sides of the vessel. She is shiprigged and has four masts and two funnels. As to passenger accommodation nothing superior if equal can be found in any other vessel of the Montreal fleet. Her saloon, which is amidships, is light and airy. The walls are fitted in polished bird's eye maple relieved with æsthetic painted designs and pillars *en relief* of white and gold and with rich gold capitals. The furniture is upholstered in crimson. A gallery open above the saloon contains a cozy ladies' saloon fitted with gorgeous furniture upholstered in a rich blue. The ship is illuminated throughout with the incandescent electric light, 40 of which illuminate the saloon. On her way up from Quebec, the "Vancouver" accomplished a run of 16 knots per hour. From the *Mail* we learn that this collossal steamship was thrown open to guests of the managing directors, Messrs. David Torrance & Co., on Thursday afternoon, when the vessel was illuminated all over by a myriad of electric lights. It was like passing through fairy-land to take a glance into the saloon, where were forty incandescent lamps in operation, and where an immense throng of ladies and gentlemen were collected at a most agreeable afternoon tea, most hospitably and grandly dispensed by the hosts. This entertainment was a new and most commendable departure from the former practice of steamship companies of giving inaugural banquets on board a new ship to gentlemen exclusively, and it is hoped it will be followed hereafter.

The Merchant Shipping Act.

ST, JOHN, N. B., May 17.—At a meeting of shipowners this afternoon to take action respecting the Merchant Shipping bill, it was resolved to forward a memorial to the Dominion Government to the effect that as there was doubt as to how the bill would effect colonial shipping, and as the Dominion Government have certain power over colonial shipping, that they petition the Imperial Government to exempt colonial shipping from the operation of the act. It was decided to interview Sir. Leonard Tilley on the subject when he arrives in town.

J. S. MAYO

IMPORTER AND MANUFACTURER OF

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OF EVERY DESCRIPTION.

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AMERICAN LUBRICATING OILS A SPECIALTY.

As I carry the LARGEST and BEST assorted Stock of OILS in the Dominion, I am prepared to fill all orders Promptly and at

LOWEST MARKET PRICES.

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DANGER SIGNALS.—Reader, if you are troubled with pain, weakness, weariness and a dragging feeling in the small of the back, with thick, high colored—slimy urine, then you have alarming signals of danger, and should resort to Burdock Blood Bitters, the grand kidney regulator and blood and cleansing tonic.

THE union bricklayers and stonemasons of Buffalo with few exceptions struck work in consequence of the refusal of the employers to increase their wages.

A RUN FOR THE DOCTOR Is generally the first thing in case of any injury, but a doctor cannot always respond to the call. If you have Hagyard's Yellow Oil at hand, you have a reliable remedy for all wounds, injuries and pain. It has saved life when even doctors had abandoned hope. Keep it ready for use.

THE demand in the United States for crematories as a means of disposing of the remains of the dead has so increased that an institution is to be built in Philadelphia.

IT IS NATURAL.—It is natural for some people to be bilious, being often a result of peculiar bilious temperment, which with high living too greecy food, indigestion from inactive liver, is the frequent cause. The remedy above all others, is Burdock Blood Bitters, It is highly curative for all biliary complaints, and far better than physic for inactive conditions of the bowels.

WANTED AGENTS to sell TUNISON'S

NEW AND SUPERIOR

CANADA MAPS & CHARTS

As paying as any agency in the world. For particulars, full and free, address H. G. TUNISON, 388 Richmond St. LONDON, ONT.



GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Augusta, Maine.

THE INTERNATIONAL

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184 Sparks Street, Ottawa.

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32 First Prizes AND 6 MEDALS.



AT HALIFAX AND TORONTO, *1883.*

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Tents, Flags, Tarpaulins, Waterproof Goods, Camp Furniture, etc., etc.

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PORTABLE CANVAS BOATS MADE TO ORDER

SEE OUR NOVELTIES IN **Camp Furniture!**



Send for CATALOGUE AND PRICE LIST!

At Toronto, Ont., and St. John, N.B., we made the best Display of Tents ever shown in Canada—and we never substitute an article inferior to sample in filling orders.

We control "THE LATOUR PAT." for Camp Furniture, the best on earth. The only Gold Medal ever given for this class of goods was awarded to the Latour Camp Furniture at Toronto in 1882.

SAIL-MAKING.

We have secured the services of the best practical sail-maker in Canada. Orders in this line will receive prompt and satisfactory attention, as is usual with all orders entrusted to us.

Agency for the WILDERMUTH BED SPRING, the best in the Market.

A. G. FORGIE, MANAGER,

International Tent & Awning Co.,

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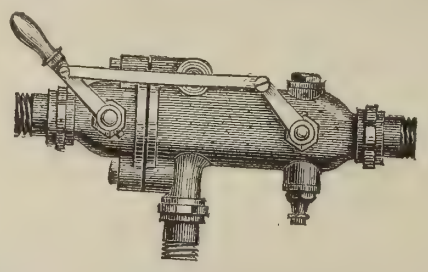
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Montreal Brass Works,

St. Peter and Craig Streets, Montreal.

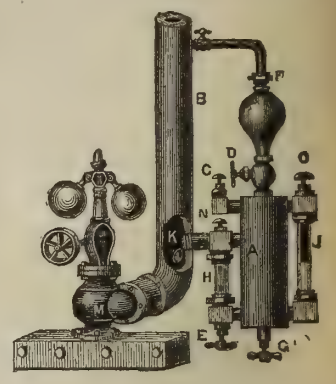
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Acknowledged to be the Best Boiler Feeder in the World.



Will lift 20 feet, and take water at 150 degrees. Only one handle to start and stop. No valve to regulate. CHEAPER than any other Injector in the market. Also, PATENT EJECTORS for conveying Water or Liquids. CIRCULARS ON APPLICATION.

The Continuous Feed Lubricator Saves 50 per Cent in Oil.



ROBIN & SADLER

Have been awarded Three Years in succession at the Provincial and Dominion Exhibitions in Montreal, First Prizes for

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Fire-Engine Hose, &c.

Send for Price Lists and Discounts to the Factory

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MACHINERY.

STEAM ENGINES, STEAM PUMPS, STEAM BOILERS, SAW MILL MACHINERY,

Of Every Description.

RUBBER BELTING,

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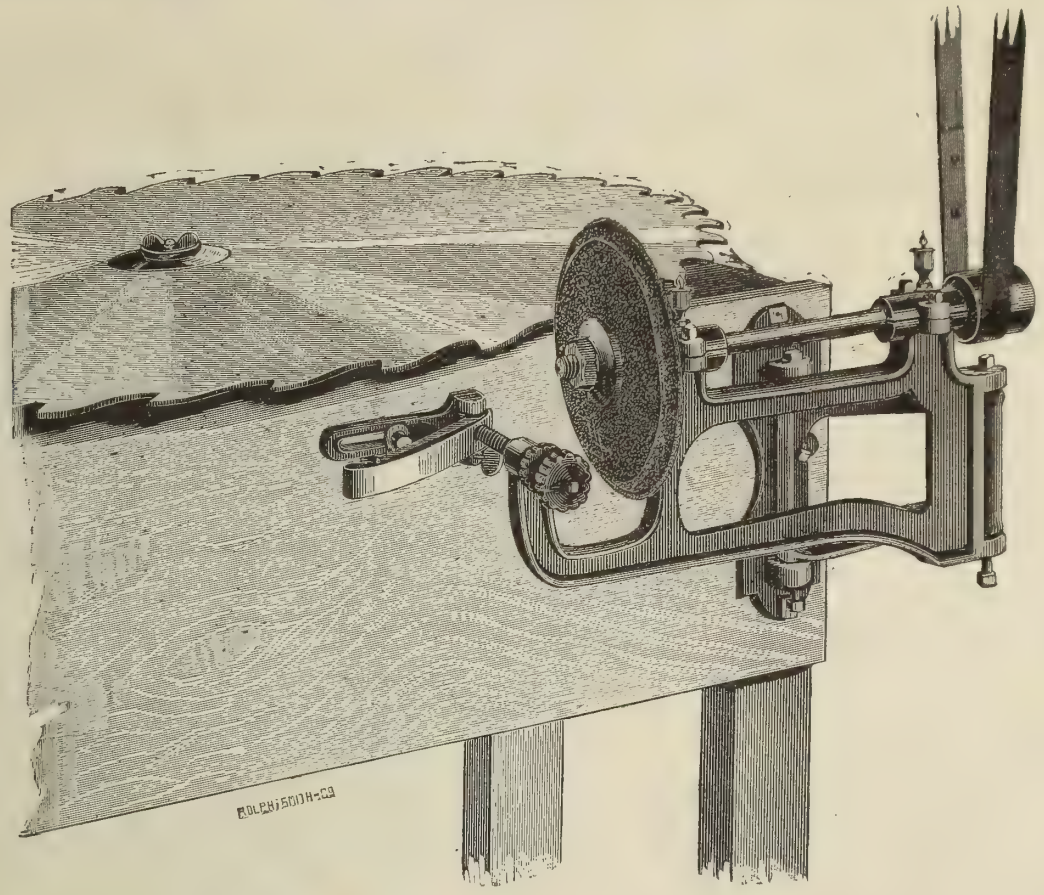
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SAW GUMMER and SHARPENER

The Handiest Machine for these purposes ever Invented.

Don't Heat!

Cheap!

Very Simple!



Accurate!

Works Fast!

Complete!

Lumbering Season, 1884

Saw Mill Owners in providing for the season of 1884, ought not to lose sight of ROGERS' SAW GUMMER for it will save them more money in proportion to the amount invested than any other machine.

Only $30, including Emery Wheel; Table and Countershaft, $10 extra.

A few of ROGERS' SAW GUMMERS were put on the market last season, and we quote some of the commendations received:

JAS. HADDEN, Foxmead, says:—
"Your machine is all I expected."

CHAS. ANDERSON, Anton Mills, says:—
"I have given it a good trial, and am well pleased with it. "I find it is one of the indispensables in a saw mill." * *

ROBT. R. WEIR, Orillia, writes:—
"It works like a charm, and is very accurate in its work."

CRONE & PATTON, Hoc Roc Mills, Gravenhurst, says:
"The Rogers' Saw Gummer purchased from you gives "good satisfaction, * * it cannot be beat."

D. DAVIDSON, Pentanguishene, writes:—
"We are well pleased with the Gummer."

W. W. BELDING, Wyevale, writes:—
"I have the Gummer running and it is giving good "satisfaction."

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Hart Emery Wheel Company, Limited - Hamilton, Ont.

☞Manufacturers of Hart's Celebrated Patent Wire Strengthened Emery and Corundum Wheels.

The William Hamilton Manufacturing Company, Limited

MANUFACTURERS OF

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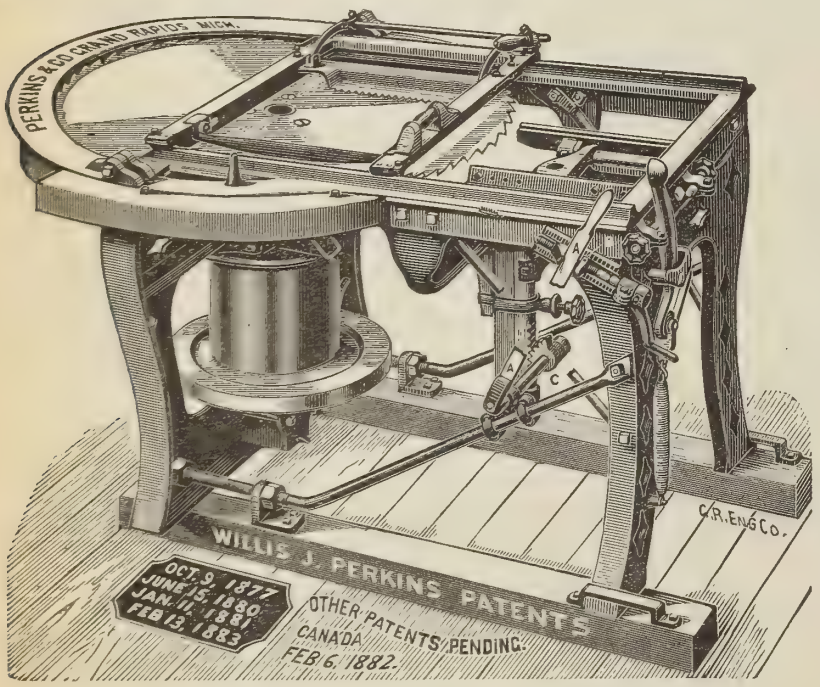
OUR SAW MILL ENGINES are made Strong, Neat and Durable, knowing well the ever varying Strain they are subjected to in driving a Saw Mill.

We wish to call the attention of our Canadian Lumbermen to our First Class HEAVY SAW MILL MACHINERY for Circular Mills and Circular and Gang Mills of the most improved designs. We are prepared to submit Plans and Specifications, together with any information that our many years of close application to the Saw Mill Business may have suggested to us, also when required to enter into contract for building and supplying the machinery complete, superintending the starting of the same, and handing over the mill to its owner in first-class running order.

Besides the variety of Machines we build for the manufacture of lumber we have added to our list the

PERKIN'S PATENT SHINGLE MACHINE.

aving obtained the sole right to manufacture and sell for the ominion. Also Drag Saws, Bolters, Sappers, Jointers and Packers.



GRAND TRIUMPH.

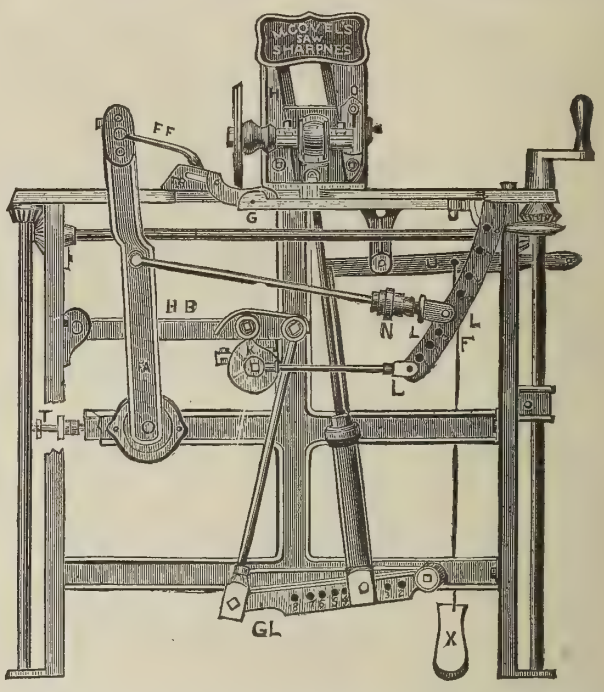
Willis J. Perkins' Drop Tilt!

The only Horizontal Saw Machine on which a thick slab can be cut from the bolt.

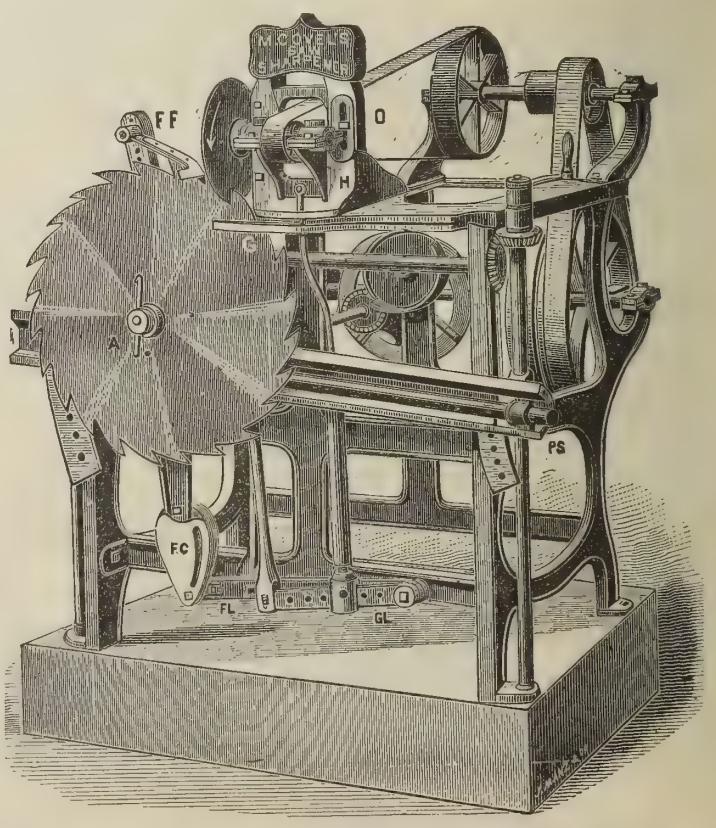
☞ *SECOND CUT ALWAYS A SHINGLE.*

Knots, rots, hearts, bolt squared rift-ways, and all irregularities cut off at one clip. This improvement will pay the price of the whole machine every season by increase of quality and quantity cut

THE M. COVEL PATENT SAW SHARPENER.



The above Cut No. 1 shows some very important changes that have lately been made, which makes the machines far less complicated for new beginners to operate. Cut No. 2 shows this machine with a circular saw upon it ready for operation.



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3. It furnishes complete and reliable quotations of prices of lumber in all the leading markets.

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5. It costs only $2.00 per year to have it sent, post-paid, to any address in Canada, and no land owner, lumber dealer, manufacturer or individual in any way connected with timber industries, can afford to do without it.

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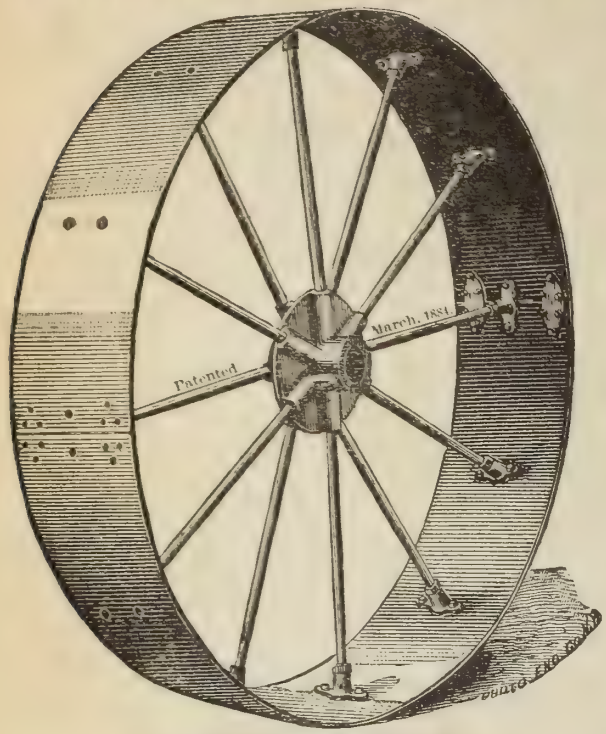
It has a circulation among saw mill owners, manufacturers, lumber and timber dealers and all classes connected with the timber business.

Examine the field, count the cost, and you will at once decide that the CANADA LUMBERMAN is the

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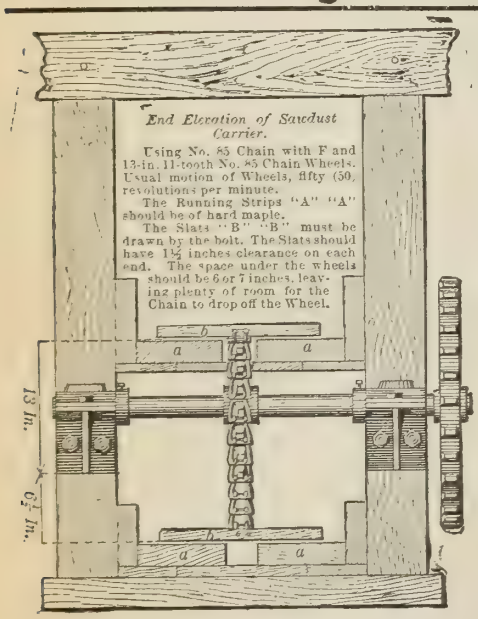
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60	feet,	13	inches	wide,	8	ply.	84	feet,	26	inches	wide, 8 ply.
49	"	18	"	"	8	"	57	"	20	"	" 8 "
49	"	12	"	"	6	"	49	"	11	"	" 8 "
103	"	22	"	"	8	"	47	"	12	"	" 6 "
52	"	20	"	"	6	"	73	"	20	"	" 8 "
101	"	18	"	"	8	"	51	"	16	"	" 8 "
52	"	18	"	"	8	"	37	"	16	"	" 8 "
36	"	12	"	"	8	"					

Many of the above are endless, and are the second belts to same parties, ordered after thorough trial. Try a **GANDY BELT.** Address the Sole Canadian Agents,

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Sawdust, Slab & Offal Carriers. Log Jacks, Loading Logs lengthwise on cars.

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USEFUL TO MOVE ALMOST EVERYTHING

If doubtful whether or not it will apply to yovr wants. Send for information giving full particulars.

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SAVE YOUR TIMBER, (making the price of a saw every fifteen days) by using our Thin Saws,

60 INCH DAMASCUS Tempered Saws, 9 and 10 guage, guaranteed at 800 revolutions or less, six to eight inch feed or less.

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LUMBERMAN CLIPPER SAW for thin Inserted Saws.

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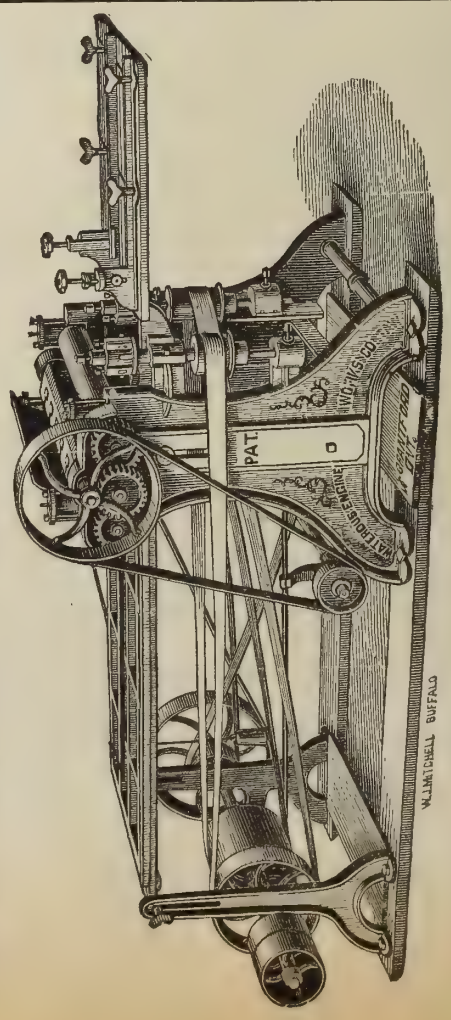
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VOL. 4. PETERBOROUGH, ONT., JUNE 16, 1884. NO. 12.

RARE TREES IN CANADA.

One of the most interesting things in connection with tree planting is the extension by artificial means of the natural range of the growth of trees. The change is generally to a colder and more severe climate. In Toronto three kinds of magnolias are grown in the open air, one of which will attain a height of some forty feet. This is exclusive of the Liriodendron, which is a native though seldom seen in its wild state much west of Hamilton; occasionally it is found near the southern corner of Georgian bay. The introduction of rare kinds is generally a slow process. Magnolias have been grown in Toronto for some thirty years; yet so seldom are they seen that the newspapers but last year spoke of one, on College street, as if it had been the first of the kind. The rarest tree grown here is, perhaps, the gingo tree (*Salisburia adianti folio*) of which it is doubtful if there be, out of doors, more than one specimen; yet that this native of China and Japan, which is never seen in Europe, we believe, south of the Mediterranean, thrives here, is a fact to be borne in mind. The aristolochi has been found difficult to reproduce; all attempts in hot houses, have, so far as we know, failed; yet accident has given us proof that it can be put into condition to germinate and has germinated, after being a whole winter under ice, from melting snow and falling rain, forms to the depth of several inches. Having been under this ice in the winter of 1886-4, some seeds germinated, and the plants are now in the possession of the writer; one plant of this native of the south was allowed to remain under ice a second winter, and it commences the spring in a perfectly healthy state The custard apple grows naturally as far north as Niagara, and its artificial reproduction here is not improbable. The tulip tree, before mentioned, few take the trouble to grow, though it can scarcely be said to be out of its latitude here. Over the merits of the ailanthus it is possible to dispute; but when placed at a distance from the dwelling, where the objectionable odor of the male tree from which the female is with characteristic gallantry presumed to be free cannot offend, its long lanceolate leaves give an oriental touch to the landscape. The dwarf chestnut, and the buckeye, another and beautiful variety of chestnut, can be grown here without difficulty; but seldom is either of them seen.

Our nurserymen, as a rule, are content to go on the beaten track; they seldom trouble themselves to produce new varieties of trees; but if they do not wake from their slumber they must expect to be left behind, Of course for general purposes our own trees deserve to get, the preference. But not all the beauty of the floral world is native to our soil. There is beauty in variety; and variety should now, when opportunity offers, be sought after and encouraged. Even so beautiful a shrub as the burning bush (*Wahoo*) and one so easily grown, is seldom seen in our shrubberies. For the wood it is desirable to learn by experiment, what is the most economical tree to grow. The ailanthus, of which the wood is suitable for furniture, grows with extreme rapidity. The black walnut must either be reproduced, or its use in the manufacture of furniture be abandoned. At present it is perhaps the most profitable tree that can be grown; and yet it is doubtful whether it is being planted to any extent worth mentioning. Alongside of the black waluut, for economic value may be placed the hickory. Both of these, the most valuable of our native trees are being neglected. Most of the trees that are being planted are of comparatively little value. If common trees must have the preference, that is no reason why rarer kinds should not be assigned their true place; and this we fear is not being done. If we are now to begin to replant in earnest, the work should be done with discrimination and with a view to producing the best results, æsthetic and economic.—*Agriculturist*

SHADE TREES—PLANTING, AND AFTER-CARE.

Trees that have grown in the open air, will do better than those from thick woods. In selecting those only should be taken that are perfectly sound; a dead spot, however small, will extend until it ruins the tree. Trees with short trunks and large thin tops should be chosen, avoiding such as divide into two nearly equal branches, for they will be very likely to split down. In taking up trees, every root should be secured to the utmost fibre as far as possible, and without splitting or bruising them, and the holes for planting them should be large enough to receive the roots in their natural position. While out of the ground, the roots should be protected from the air and kept moist, and in setting them fine rich earth should be packed around all the fibres. Trees should be staked to prevent the wind from starting the roots, and well mulched to keep the ground moist and loose. A vicious practice prevails very extensively of cutting off the entire top. It is the death warrant of the tree. It may put out new branches and do well for a few years, but the wound will seldom heal; that will ultimately decay down into the centre of trunk and the limbs will break off or die. This process, in its various stages, may be seen in a large proportion of the trees that have been treated in this way. If a trunk must be cut off, let it be just above a thrifty limb, whose growth will heal over the wound. If branches must be removed, they should be cut close to to the trunk, great care being taken not to injure the bark or wood, the cut made smooth and covered at once with wax or paint so as to exclude the air. Shade trees are usually set too thick, from two to four times too many being put on the ground, consequently, as soon as they have grown a little, they interfere with each other, and a struggle for existence commences, in which all suffer and symmetrical growth is prevented. Trees should never be allowed to exclude the direct sunlight from a house; to do so is to make it unfit for a dwelling. To remedy this by pruning, will leave naked trunks covered with unsightly scars, too large to heal over, which will ultimately decay and kill the tree. Thinning out is but little better, for the trees that remain will be stragglers standing at irregular distances, with forlorn and badly shaped tops.

Shade trees should be carefully watched, and all branches that start where they are not wanted, that will ever interfere with streets, walks, buildings, or other branches, should be promptly removed. Such branches are often neglected until their removal irreparably injures the shade trees. All dead limbs should be taken away at once.—*American Agriculturist.*

PRODUCTS OF OUR FORESTS.

The *Monetary Times* in its useful compilation and condensation of information as to our exports has the following in regard to products of the forests:

	Fiscal year '82.	*Fiscal year '83.*	
Article.	*Quantity.*	*Quantity.*	*Value.*
Potash, brls	11,109	7,801	$ 268,055
Tanbark, cords..	91,791	65,194	321,991
Firwood, " ..	179,575	164,900	388,910
Tel. poles, etc. ($205,054)			227,191
Deals, St. hd.....	273,840	266,068	8,656,541
Boards, &c. M. ft.	725,914	632,148	8,021,095
Shingles, M.....	126,481	100,511	283,530
R. R. ties, No....2,743,848		2,126,668	554,328
Sq. timber, tons.	89,094	25,843	194,345
Sq. Wt. Pine " 2,188,145		213,999	2,852,908
" Red " "	188,436	25,843	223,298
Logs, spruce, &c.	8,780	28,857	162,104
Knees, &c., pcs..	25,331	36,588	33,660
Masts, &c., No...	34,921	27,597	44,197

The British glass-maker, soap boiler, and chemist, make use of our pot and pearl ashes by thousands of barrels; and the American tanner is glad to get, for his tanneries in Maine and adjoining states, the hemlock bark of New Brunswick and Quebec. Our forests furnish firewood, also, to a number of the Eastern States. All along the chain of lakes, Canadian poles have been in demand, for telephone and telegraph lines; and so they will be, until such time as some one perfects a system of underground telegraphy. Among sawn lumber, New Brunswick send abroad of deals, that largest item in the list of forest products exported ($8,600,000 worth) most spruce and Quebec is credited with most pine. But we suspect that Ontario should get credit for a large share of what goes down to account of her neighboring province, from the circumstance that they are shipped from Quebec ports. Great Britain takes the bulk of them, France and Uruguay coming next. For planks and boards, &c., the great Republic is the main market, followed by South America, Australia, and China. We export $8,000,000 worth in all. Masts and spars from our forests, find their way to twenty different countries, all over the globe. Wooden shingles for roofing are unknown in Britain, but the Indies and the United States use plenty of them. Canadian square timber, whether pine, oak, elm, ash or maple, goes mostly to Europe. The aggregate export of forest products represents a value in 1883 of $25,370,000.

Sawdust Instead of Sand.

A distinguished feature of this invention is the substitution of sawdust for sand in house-plastering. The mixture of sawdust and lime constitutes a warmer, cheaper and lighter plastering than has yet been applied to walls and ceilings.

Being somewhat porous and full of very small air spaces it is an excellent non conductor of heat, sound or dampness, as it causes the fire in a room to warm the inner surface of the walls. Sand plastering is proverbially cold and the medium through which a large percentage of heat is conducted from the room. One has often noticed in sandplastering nail-holes which incr ease in size as the material runs out with every jar of the door; the glutinous material used in sawdust plastering so unites the mass that there is no possible chance for particlas to escape and disfigure the walls, especially as the plaster thus made is exceedingly light and less affected by jars. The surface is susceptible of being finished in all ways like other plastering. The porous nature of sawdust helps to diminish echo in churches, halls and other buildings, but hard finish must not be used when it is desirable to attain this result. The elasticity of the sawdust plastering obviates the liability to cracking.—*Builders' Journal.*

The Phylloxera Commission.

The French phylloxera commission announced at its last meeting that none of the methods proposed for exterminating the pest of the vine during 1883 gave any hope whatever of success; the prize of 300,000 francs offered to the author of a practical remedy could not therefore be awarded. The renovation of the vines and means for their defence have, however, been largely developed.

Freight on the Erie Canal.

Grain freights are very low on the Erie canal for so early in the season, wheat being carried for 3⅝ cents per bushel, and corn 3¼ cents. Lumber proves to best cargo at $2 per M to Albany and $2.65 to New York.

A Large Purchase.

Mr. E. B. Eddy has purchased 140,000 logs belonging to the Scottish Canadian Lumber Company, which were sold by the receiver.

DURABILITY OF TIMBER AND WOODWORK.

The proper seasoning of timber is one of the very best means of securing it against decay, from whatever cause decay may originate. The seasoning, however, to be effectual, must be thorough and complete. In late years the modes of seasoning timber have changed. In olden times it was allowed to dry in the air for a long period of time. The carpenter or builder of the present day who would feel any delight in the progress of his art, cannot feel insensible to the advantage of giving durability to his materials; nor yet be uninterested in any inquiry into the probable extent of their duration. Not that his fame as an artist rests solely on the extent of their duration; for while his productions are worthy of imitation, the remembrance of them will be preserved by the engraver's art as long as there shall be men capable of paying a just tribute to the memory of departed merit. The French army, in 1799, under the great Napoleon, destroyed the celebrated bridge across the Rhine, at Schaffhausen, but the fame of Grundenmann the carpenter, will long continue; and the form of that excellent structure of art will only cease to be remembered when carpentry itself no longer exists. We have introduced our subject in this way for the purpose of citing some of the most remarkable incidents on record in all history. We have taken the pains to condense a number of the most remarkable of these, as showing our readers how long timber has been preserved in an almost perfect state. Examples are not wanting in the history of Mexico, where timber has been found in a perfect state after being cut over three hundred years ago. But our examples are obtained mostly from ancient history, and exist in the old world. The piles of the bridge built by the Emperor Trajan, across the Danube, is a striking instance of the durability of timber in a wet state. One of these piles were taken out and found to be petrified to the depth of three-fourth of an inch; but the rest of the wood was little different from its ordinary state, though it had been driven more than sixteen centuries.

The piles under the piers of the London Bridge have been driven about six hundred years, and from observations made from Dancis, in 1746, it did not appear that they were materially decayed; and they are to-day sufficiently sound to support the massive superstructure. These piles are cheifly of elm.

In digging away the foundation of the old Savoy Palace, London, some sixty years ago, which was built nearly seven hundred years before, the whole of the piles consisting of oak, elm, beech and chestnut, were found in a perfect state of soundness; as also was the planking which covered the pileheads. Some of the beech, however, after being exposed to the air a few weeks, though under cover, had a coating of fungus spread over its surface.

On opening one of the tombs of Thebes, some sixty years ago, there was discovered two statues of wood, a little larger than life, and in good preservation; the only decayed parts being the sockets to receive the eyes. The wood of these statues is most probably the oldest in existence that bear traces of human labor. We believe they are in the British Museum to-day.

A continued range or curb of timber was discovered in pulling down a part of Trowbridge Castle, in Kent, which was built over seven hundred years ago. This curb was built into the middle of the thickness of the wall, and was, no doubt, to prevent the settlement likely to happen in such heavy piles of buildings, and therefore is an interesting fact in the history of constructive architecture, as well as an instance of the durability of timber.

In digging for the foundation of the present house at Ditton Park, near Windsor, the timbers of a drawbridge were discovered about ten feet below the surface of the ground; these timbers were sound, but had become black. Hakenwell says that Sir John de Molines obtained liberty to fortify the Manor House of Ditton, in 1396, and it is most probable the drawbridge was erected soon after that time; accordingly the timber had been there about 400 years.

The durability of the framed timbers of buildings is also very considerable. The trusses of the old part of the roof of the Basilica of St. Paul, of Rome, was framed in 816, and they were sound, and in good condition in 1814, a space of nearly 1,000 years. These trusses are of fir.

The timberwork of the external domes of the church of St. Mark, at Venice, is more than eight hundred years old, and is still in a good state.

The timber roof of Crosby Hall, in London, was erected over 300 years ago, and the roof of Westminister Hall, which is supposed to be of chestnut, is now over three hundred and fifty years old.

The rich carvings in oak, which ornamented the ceilings of the King's room, in Sterling Castle, are many of them still in good preservation. It is nearly three hundred and fifty years since they were executed, and they remained in their original situation till a part of the roof gave way, in 1777, when the whole was removed, and aftewards were dispersed among the collectors of curious relics of the old times.

In some of the old mansions which yet remain, and in ancient cathedrals and churches, there is nothing like dry rot found.

In regard to the durability of the different woods, the most odoriferous kinds are generally esteemed the most durable; also the woods of a close and compact texture are generally more durable than those that are open and porous; but there are exceptions, as the wood of the evergreen oak is more compact than that of the common oak, but not near so durable. If we were asked if any of the woodwork of the Chicago of the present day would be found in existence one thousand years hence, we should promptly answer "No," and in a future issue may give our reasons. With us, our woodwork, exposed to the rigors and uncertainties of climate, soon goes into decay.—*Lumber Trade Journal.*

EXHIBITION OF WORKS IN WOOD.

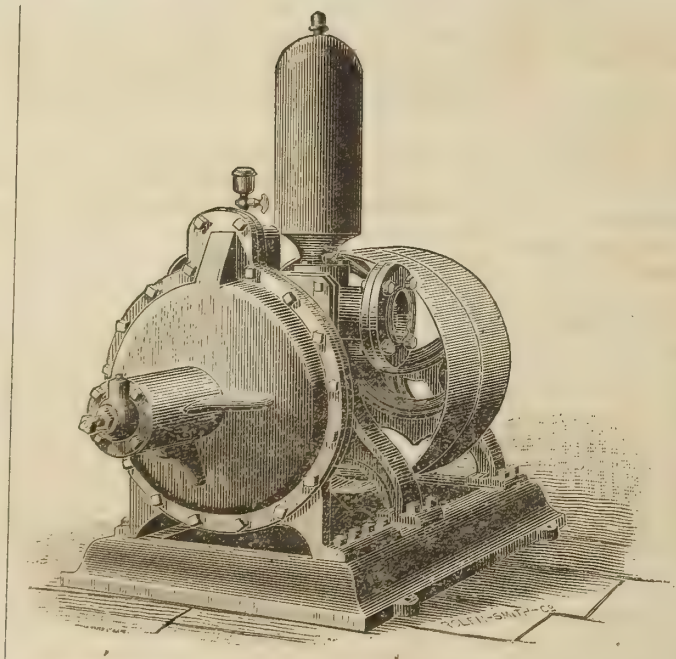
An exhibition of works in wood was opened lately at the hall of the Carpenters' Company, London-wall, London, England. The ceremony was performed by the Lord Mayor, who was accompanied by the Lady Mayoress (Miss Fowler). The exhibition is divided into two parts. The first is devoted to constructive and ornamental carpentry and joinery, and the second part to wood carving. The exhibits in first part are located in the great hall, and comprise models of buildings, bridges, roofs, staircases, the interior fittings of buildings, such as doors and windows, house furniture, church furniture, including ornamental alter railings and reading desks, and various architectural designs. The second and smaller portion of the exhibition, though in point of fact the most interesting is located in an ante-room. It comprises specimens of all kinds of wood-carving, ancient and modern, as well as models of ornamental furniture. There are 140 exhibitors, and the exhibits number over 500, which for the purpose of competition have been arranged in 5 divisions. The first division comprises constructive carpentry, in which skill in obtaining the greatest amount of strength at the smallest expense of material and labor is the chief object of the constructor. The second division consists of constructive and ornamental carpentry, the articles exhibited being such as are used in obtaining architectural effect. The third division consists of joinery, all the articles exhibited being of wood and handmade. The fourth division is devoted entirely to wood-carving, while the fifth consists of models or drawings or any of the articles comprised in the former divisions. There are 37 prizes offered for the successful competitors in each of the classes into which the five divisions are divided. In every case the first prize is £5 and a medal, and the second prize £3. The exhibition will remain open until June 14.—*Times.*

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An Improved Rotary Piston Force Pump.

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	Suction.	Discharge.			
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3	4 "	3 "	250	250	150
4	5 "	4 "	250	400	225

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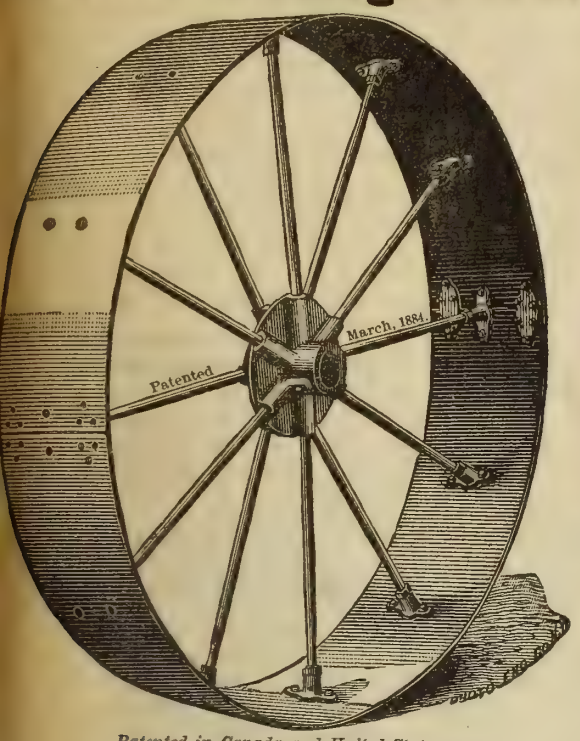
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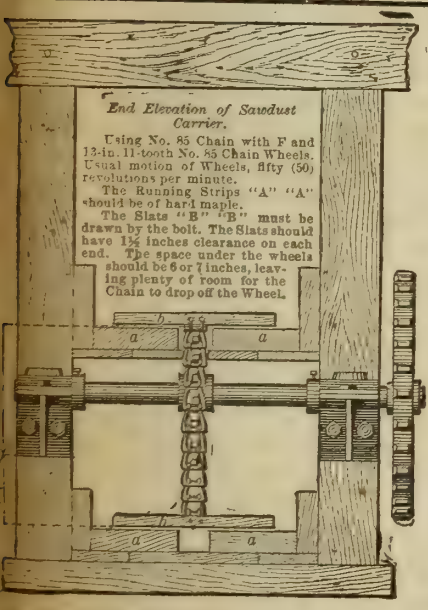
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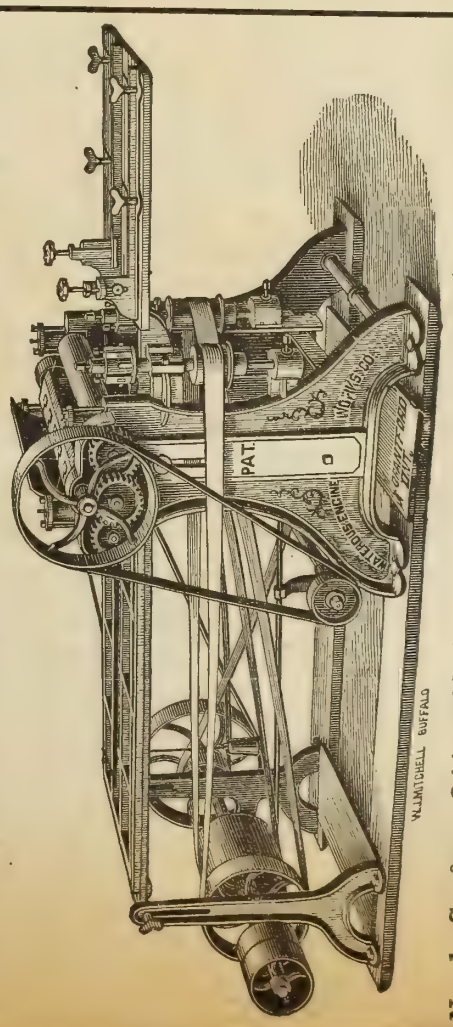
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TREE PLANTING.

Following the example of some of the American States, the Provinces of Ontario and Quebec have severally designated a day, in the spring of each year, called Arbor Day, for tree-planting. There is of course no particular day in the year that is best for the transplanting of every kind of tree. All trees will grow best when they are beginning to bud—when they are in the full vigor of life—and different trees reach this stage at times that vary as much as two or three weeks. Any Arbor Day which the legislature may suggest is not, therefore, the best day for transplanting every kind of tree; it may be late for some, suitable for others, and early for such as bud latest. This fact should be borne in mind in tree planting. It is well to designate a day arbor day, for it calls attention to a work which it is desirable to do. Nevertheless the work should be done at the time most suitable for it. A tree transplanted in full leaf would almost certainly die; the evaporation through the leaves being more than the roots, in their new home, would be likely to be able to supply. Let arbor day be observed, by all means, but let not other days which will be more suitable for the planting of some trees be neglected. The main use of an Arbor Day is the tendency it has as a reminder of the performance of a duty which might not otherwise be thought of. Quebec made a good start last year; Ontario depended too much upon the unaided letter of the law. But we shall doubtless learn to do these things with the aid of Mr. Phipps, in the best way, in time. After the trees have been planted, their growth may depend entirely on their being watered, for a while, the first season, especially if the soil and season be dry.

Some of the American States try to interest school children in tree-planting; an achievement which might seem to be accomplished, when it was not, by the interest they took in the inevitable holiday. If children could be taught to respect trees, so far as not wantonly or thoughtlessly to injure them, a great point would be gained; for next to drought, if not more than drought, the street urchin, as an enemy to trees, without malice in his heart, is to be feared.

One of the most interesting things in connection with tree planting, is the extension by artificial means, of the natural range of the growth of trees. The change is generally to a colder and more severe climate. In Toronto, three kinds of magnolias are grown in the open air, one of which will attain a height of some 40 feet. This is exclusive of the Liriodendron, which is a native though seldom seen in its wild state, much west of Hamilton; occasionally it is to be found near the southern corner of Georgian Bay. The introduction of rare kinds is generally a slow process. Magnolias have been grown in Toronto, for some thirty years; yet so seldom are they seen that the newspapers but last year, spoke of one, on College street, as if it had been the first of its kind. The rarest tree grown here is, perhaps, the Gingo tree (*Salisburia adi antifolio*) of which it is doubtful if there be, out of doors, more than one specimen; yet that this native of China and Japan, which is never seen in Europe, we believe, south of the Mediterranean, thrives here, is a fact to be borne in mind. The aristolochia has be found difficult to reproduce; all attempts in hot-houses, have so far as we know, failed; yet accident has given us proof that it can be put into a condition to germinate and has germinated, after being a whole winter under ice. The seeds fell on a spot on which every winter, ice, from melting snow and falling rain, forms to the depth of several inches. Having been under this ice in the winter of 1883-4, some seeds germinated, and the plants are now in the possession of the writer; one plant of this native of the south was allowed to remain under ice, a second winter, and it commences the spring in perfectly healthy state. The Custard Apple grows naturally as far north as Niagara, and its artificial reproduction here is not impossible. The Tulip tree, before mentioned, few take the trouble to grow, though it can scarcely be said to be out of its latitude here. Over the merits of the Ailanthus it is possible to dispute; but when placed at a distance from the dwelling, where the objectionable odor of the male tree from which the female is with characteristic gallantry presumed to be free cannot offend, its long lanceolate leaves give an oriental touch to the landscape. The dwarf chestnut, and the buckeye, another and beautiful variety of chestnut, can be grown here without difficulty; but seldom is either of them seen.

Our nurserymen, as a rule, are content to go on the beaten track; they seldom trouble themselves to produce new varieties of trees; but if they do not wake from their slumber, they must expect to be left behind. Of course, for general purposes our own trees get, and deserve to get, the preference. But not all the beauty of the floral world is native to our soil. There is beauty in variety; and variety should now, when opportunity offers, be sought after and encouraged. Even so beautiful a shrub as the burning bush (*Wahoo*) and one so easily grown, is seldom seen in our shrubberies. For the wood it is desirable to learn by experiment, what is the most economical tree to grow. The Ailanthus, of which the wood is suitable for furniture, grows with extreme rapidity. The Black Walnut must either be reproduced, or its use in the manufacture of wood abandoned. At present, it is perhaps the most profitable tree that can be grown; and yet it is doubtful whether it is being planted to any extent worth mentioning. Along side of the Black walnut, for economic value may be placed the hickory. Both of these, the most valuable of our native trees, are being neglected. Most of the trees that are being planted are of comparatively little value. If common trees must have the preference, that is no reason why rarer kinds should not be assigned their true place; and this we fear is not a present being done. If we are now to begin to replant in earnest, the work should be done with discrimination and with a view to producing the best results, æsthetic and economic.—*Monetary Times.*

HARDWOOD MANUFACTURE.

Northern Michigan is destined to become the Maine of the northwest in reference to a multifarious utilization of hardwoods in manufacture. This conclusion is based on a similarity of conditions in the two states. Each has a magnificent growth of woods both hard and soft, which are convertible into a variety of useful articles in daily use all over this country and the world. Michigan lacks one admirable wood that Maine possesses—namely, spruce; but Michigan has variety and quantity enough to keep a thousand factories running for half a century to come.

And right here it is important to call attention to the danger that Michigan will squander her best resources in the eagerness of settlers in the northern part of the state to get rid of the forests, in order to convert the land into productive farms. Here is a kind of denudation that is more to be dreaded than that of pine, because the lands stripped of hardwoods, being more fertile than pine lands are denuded more rapidly. If the apostles of forestry would spend their force less on the manufacturers of pine, and devote more of their effort to warning farmers against slaughtering their valuable hardwoods and burning them up in log heaps, the wisdom of their method would be more apparent.

The situation of northern Michigan is bound to make its hardwoods valuable in the near future. It is the very centre of the interior of the north, at the threshold of the prairie regions, and separated from them by inland seas that afford easy and cheap transportation. It is thus quite certain that the upper part of the southern, as well as the upper peninsula, will become noted for their wood manufacturing industries. Indeed the process has already begun. Bowl mills, handle factories, bung factories, basket, spoke and hub factories, and numerous other enterprises that convert hardwoods into useful articles, have been started, and new plants are frequently announced. This class of industries will grow in northern Michigan, because of proximity to markets, abundance of raw material, plenty of raw material, plenty of water power and fuel for steam power, the characteristic of the people that urges them to manufacture, and cheapness of transportation by water or rail. The larger portion of the hardwood districts of northern Michigan either borders on lakes Huron, Michigan or Superior, or is in easy reach of these bodies of water giving easy access to the great distributing markets of the country.

Now a great variety of articles made of wood come from the east. Northern New England is furnishing the larger share of them. It is only a question of a short time when Michigan manufacturers can crowd eastern producers out of the northwestern market, because the raw material and the factories to work it up will be practically at the very centre of distribution.

Considering the possibilities of northern Michigan and northern Wisconsin, also, as a field for wood manufacturing, it would be well if something could be done to arrest the destruction of the deciduous timber of those regions. Some encouragement that the people will wake up to to an economical regard for their magnificent forests may derived from the fact that wood manufacturing establishments are increasing, and that the demand for raw material thus created will convince farmers and other timber land owners, that it is their best policy to preserve their woods, until such time as it can be profitably sold. Of course the exigencies of rural life demand cleared and cultivable lands, but the usual policy of American farmers on new soil, is to cover as much land as possible in their operations. A hundred acre farm in northern Michigan or Wisconsin would give the owner more profit if 30 or 40 acres were cultivated well, while the residue were preserved for an economical use of its timber, than if it were all cleared at once, and were farmed in slovenly and exhausting manner. It is to be hoped that wood manufacturing in the timbered sections of the northwest will so rapidly increase that self-interest alone will dictate a profitable utilization of it forest wealth.—*Lumberman.*

EDINBURGH FORESTRY EXHIBITION.

In the Quebec Legislature, on the 24th of May, Mr. Owens brought up in the House on Saturday the question of the representation of the Province of Quebec at the International Forestry Exhibition, which is to be held in Edinburgh next autumn. During the last session of the House of Commons an attempt was made by Mr. White to induce the Federal Government to take action in the matter but the Premier said that as the forests were not under the control of the Dominion Government they did not feel called upon to send either an exhibit or a representative to the exhibition. The Provinces would have to look after the matter themselves. Mr. Lynch, in reply to Mr. Owens' question, said that he had also impressed the importance of some action being taken upon the Federal Ministers while on a visit to Ottawa last winter, but had met with the same reply. In consequence of the Dominion refusing to aid the project, it is not probable that any Province, with the exception of New Brunswick, will send specimens of native wood to the exhibition. Quebec will certainly not send an exhibit, as Mr. Lynch said that in the condition in which our finances were at present, it would be im possible to send as full and complete a collection as our resources merited, and it was much better to have no exhibit than a poor and incomplete one. The provinces may, however, send a representative to examine into the methods of preserving forests and growing trees, and Mr. Lynch said that if the Hon. H. G. Joly would accept the position, the Government would be proud and happy to send him to Edinburgh as the representative of the Province of Quebec.

A SHAVING MACHINE.

The caption of this articles does not refer to an apparatus to lesson the labor of barbers, but to a machine which has recently been set up at Wanzer's new factory on Barton Street and which is in constant operation there. By means of this machine heavy logs of wood are reduced to long rolls of any thickness required—from a quartes of an inch to the thirty-second of an inch, as thin as stout wrapping paper. A reporter of the *Times* was privileged to see the machine in operation yesterday afternoon. Its construction is apparently simple. It consists of a stationary knife 54 inches long and of great thickness, keen and well-tempered, and a revolving apparatus of immense power in which the logs are securely fastened. This apparatus can be adjusted to logs of any length not more than 54 inches, and not less than three feet. When the reporter saw the machine yesterday, a ponderous walnut log was being reduced to wooden paper, so to speak. As the log turned slowly—six revolutions to the minute—an interminable sheet of thin veneering emerged from under the knife and was rolled up by the workmen like so much wall paper. It required thirty thicknesses of this sheeting to make an inch. Very beautiful did it look as it came from the machine like an endless length of rich carpeting, covered with varied and attractive figuring. —*Hamilton Times.*

QUEBEC LUMBER TRADE.

QUEBEC, May 24.—The following sales have taken place within the past few days:

Ross Bros. Buckingham, pine deals to R. R. Dobell & Co., 35 per cent. adments thirds; f.o. b. Montreal $108 to $110 firsts; $70 to $72 seconds; $34 to $35 thirds.

Booth's, pine deals to J. Burstall & Co.

Eddy's, pine deals to R. R. Dobell & Co.

Prices of those lots not transpired but considered very fair.

King's, pine deals to Sharples about 35 per cent. addments $106, $69 and $33.

The above lots run about from 65 to 70 per cent. thirds; remainder firsts and seconds.

Geo. Baptist, Three Rivers, pine to Burstall about $108, $70 and $33.50 f. o. b. at Three Rivers.

Perley & Pattee's, deals, up to September sawing, reported sold to R. M. Cox, Liverpool.

Alexander Baptist, Three Rivers, pine and spruce, to Dobell; about same prices as George Baptist's.

Atkinsons, spruce, to Bryant & Powis, reported at $38, $22 and $20, and charges.

Joly's spruce, to Burstall & Co. Sewell's spruce to Dobell & Co. Pierreville, spruce, to Bryant & Powis. Prices not transpired.

Gilmour's, red pine deals all on hand at $11 per 1,000 feet, f. o. b., at Quebec.

The following sale was made some weeks ago, but not yet published:—

Bass Bros., old cutting, 100 petg. standard firsts, $105; 80 petg. standard seconds, $70; 200 petg. standard thirds $32; 200 fourths, $26, f.o.b., at Montreal.

Booth's & Moore's rafts of square pine, one raft each, sold to Burstall, prices not transpired; a small quantity of large oak has been sold at 48 cents ex dram.; a lot of large tamarac at 20 cents, and some 16 ms. of birch at 25 cents, and 15ms. at 24 cents. Richie's spruce deals aiso reported sold.

Freights are very low; latest charter is 17s. to Greenock. Steam freight has been engaged from E. J. Duggan, Three Rivers, to transport as low as 40s.

Some Ottawa sidings sold at $30 f. o. b. at mills.

Enterprising.

Messrs. Boyd, Caldwell & Co. timber limits owners on the Madawaska River, intend building a large saw mill at Calabogie, on the line of the Kingston and Pembroke railway.

THE shipments of Manistee during one week recently were 8,943,000 feet of lumber, 16,560,000 shingles, 385,000 lath, 450 cords of wood and 200 barrels of salt. Their shingle mills are turning out about 20,000,000 per week. During April the county produced 6,293 barrels of salt.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain and cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup for children teething. Its value is incalculable It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentery and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system, Mrs. Winslow's Soothing Syrup for children teething is pleasant to the taste, and is the perscription of one of the oldest and best female nurses and physicians in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

AMERICAN CERAMIC ART.

Poets have sometimes taken for their theme the rivalry in love which occasionally exists between mother and daughter. It is a painful subject, and of limited application, but, being true to nature, is therefore strictly within the domain of that kind of sentimental fiction which deals, whether in verse or prose, with the moral problems of human life. In more than one such poem both mother and daughter are represented as beautiful and attractive; and the younger woman is made to complain of the elder, that, having had and enjoyed her youth and its fruition, she ought not to stand in the light of the younger and less experienced generation. Most strangely, England and America, mother and daughter, seem as if they were destined to realise something like this personal rivalry—substituting the commercial arts in place of the affections. The United States are, it would appear, endeavouring to wrest the attentions of the world from the parent nation, and trying to charm away her former admirers. They learn from us, and it must be owned in some matters improve upon our instruction. Their illustrated periodicals are ahead of ours in printing and pictures; they produce playing-cards—"tinny"—to perfection; and now, so it is said, are likely to beat our glazed earthenware out of the field. How does this come about? Some twenty years ago America had no school of wood-engraving worth mentioning. Indeed, she was in the habit of importing every playing-card used from the Atlantic to the Pacific; and down to the present decade her earthenware industry could not pretend to cope with our own. Having no native school of wood-engraving, what America did was to import from England the very finest wood-engraver whom this country has produced since the revival of the art by Thomas Bewick, in the latter half of the eighteenth century. The United States offered that accomplished artist, who was also a man of letters, more money and greater consideration than he obtained, or was ever likely to obtain, here. Our loss was his and their gain, and the example of his splendid work spreading far and wide through a new and rich country has led to the happiest results for them. The same thing happened with the playing-card business, and, it will be remembered, with the watch trade as well. We who, so to speak, taught them the trick of producing the best goods in the market, now import playing cards of their manufacture, just as the Swiss trade returns bear witness to the native enterprise of Switzerland in the perfection of cheap watchmaking. Does some such open secret lie at the bottom of the threatened American earthenware rivalry with Great Britain? If so, our capitalists and employers of artistic labour are to blame; if not, there is no reason why Staffordshire should not beat any State in the Union. In this case the mother, in the plentitude of her strength and beauty, must not yield her power of pleasing and pride of place; or, to adopt an American colloquialism, "take a back seat."—*Daily Telegraph* (*London, Eng.*)

Trent Valley Canal.

The great necessity of the immediate construction of this artery towards the commerce of Canada, may be seen in the fact that Chicago is now shipping grain down the Mississippi and by Philadelphia, for the same rate as by the Grand Trunk and by New York. The shortening of the route some 500 miles by the Trent Valley Canal over New York route and many miles more over the Philadelphia route would give Montreal the control of the grain trade of the North-West. It is to be hoped our commercial centres will be able to look at it in its true light, and lend their influence in urging its immediate construction. Montreal people are asking to have the tolls on the canals removed to give them equal chance with New York in competing for the Chicago grain trade. This is another urgent reason for the construction of the Trent Valley Canal.—*Trenton Courier.*

Planting of Trees.

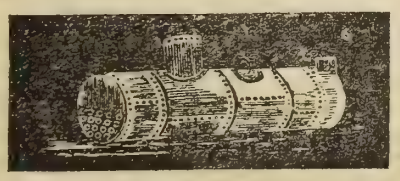
In an earnest and well written editorial upon "The Planting of Trees," the Montreal *Gazette* calls attention to the importance of the subject. With rather too sanguine a spirit, it says that "a conviction of its necessity, with a desire as far as possible to prevent further waste and repair the mischief done, has spread over the whole of North America." We should be only too pleased to acknowledge it, were these sentiments prevalent in this part of the country. The editor highly approves of the work being done in the Forestry department of Agriculture at Washington, under the management of Professor Eglestone, and strongly recommends to our notice a little book just published by him, entitled "The Hand-book of Tree-planting," as being as well adapted to Canada as to the States. We hope that our booksellers will soon enable us to test the merits of this work.—*Orillia Packet.*

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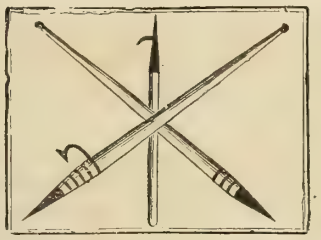


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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DRACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., JUNE 16, 1884.

THE annual sales of sawed lumber in the United States are said to aggregate $243,000,000.

THE total length of public roads in France is 18,750 miles, of which 7,250 are bordered with trees.

SIX car-loads of spruce logs are stated to be used in the manufacture of paper for each issue of the New York *Herald.*

MR. JAMES BOWEN, jr., lumber merchant, died on Monday morning, June 2nd, at Quebec, deeply regretted by the merchantile community.

THE Winnipeg Lumber Company have now 13,000,000 feet of logs at Crookston, Minn., which they propose to float down the Red Lake River and Red River to Winnipeg. They are mostly white pine logs of the best quality.

A QUEBEC despatch says that a large quantity of lumber manufactured by the saw mills on the lakes and streams along the line of the Quebec Central Railway for the South American market is being brought to this port for shipment.

IT was decided that the annual meeting of Forestry Congress in August or September next should be held in Saratoga, N. Y., and Mr. John A. King, Mr. John S. Hicks, and Dr. Hough were appointed a committee to make the necessary arrangements.

A PROMINENT Chaudiere mill owner stated that during the last twenty years, the length of time he had been engaged in the lumber business, he estimates that the destruction of timber by bush fires would aggregate more than ten times the entire cut during these years.

S. S. BOYCE, for the past three years editor and manager of the Chicago *Journal of Commerce*, has severed his connection with that paper, and will devote his energies to the organization of the National Industrial Congress, of which he is secretary and treasurer, and to the development of the raw material interests of the country.

ONE of the French societies, in the interests of the industrial classes, has recommended the suppression of all circular saws in workshops where practicable. The reasons given for this action are that such saws are extremely dangerous for workmen; they require much more force than other saws; they cut a broad line, and consequently produce more waste.

A LUMBER trimming machine has been patented by Mr. Edward Heyde, of East Saginaw, Michigan. It is an improved apparatus for raising and holding in position any one of a series of cutting off saws arranged in a bench over which boards are carried to have the ends trimmed square and to specified lengths, the saws being arranged for trimming to several lengths.

THE large majority of the 6,000,000,000 feet of pine lumber produced in the States of Michigan, Wisconsin and Minnesota is controlled by not exceeding one hundred men or firms, and it is a very simple proposition that a little co-operation between these one hundred and fifty firms would put the log production and lumber market under some sort of control, but it does not seem to work that way.

THE following is the full text of the bill to protect timber from depredation as passed by the United States Senate: "Every person who unlawfully cuts or aids, or is employed in unlawfully cutting, or wantonly destroys, or procures to be wantonly destroyed, any timber standing upon the lands of the United States, which in pursuance of law may be reserved or purchased for military purposes, or upon any Indian reservation or lands belonging to or occupied by any tribe of Indians under the authority of the United States, shall pay a fine of not less than $600 or be imprisoned not more than twelve months, or both, in the discretion of the court.

THAT was a startling statement made before Forestry Congress in Washington, recently, that a belt of growing timber nearly a half mile wide, along the entire length of every railroad, would be necessary to keep up the supply of ties, not to mention bridge and other timbers. It seems incredible; and, if not an exaggeration, it is better calculated than any other item we have ever seen, to impress upon the public mind the extent of timber destruction that is going on, and the necessity for concerted measures by government and people for restaring the waste. That is the mission of the Forestry Congress, and it should receive the co-operation of every intelligent person in the country.—*Lumberman's Gazette.*

AN IMPORTANT PROJECT.

A movement is at present on foot among pine land owners north and west of here, principal among whom is David Ward, of Pontiac, and the mill men of the valley, which if carried into effect would prove of incalcuable benefit to the business interests of the valley. This is to make the mills on the Saginaw River the centre to which the logs from the lands owned by those interested in the move shall be brought to be converted into lumber. The log crop of the region named is at present handled principally by small concerns, many of them railroad mills to which the logs must be brought by rail and when cut the lumber must again be railroaded to convenient points for marketing. As the timber is cleared from the land in the neighborhood of these establishments the haul is necessarily lengthened and the expense of bringing logs to the saw is materially increased until it has now become a necessity to build new mills on the land yet to be lumbered or adopt the plan suggested of bringing the product to a central point for cutting from which the lumber can be readily put upon the market. It is claimed that the latter course will be much cheaper than to build mills that must shortly become as inconvenient as the other small ones have proved to be, and which must ultimately be abandoned because of the exhaustion of timber in their vicinity. The logs could be brought to the mills on the Saginaw river at an expense but little greater than that of taking them to the smaller and isolated mills, and be quickly converted into lumber which when placed upon the docks would be in the market from which so many parts of the country draw their supply, and would be ready for sale and shipment by land or water to any point. With the immense cutting capacity of our mills the entire product of the region north and west of here could be readily handled, and the lumber thus brought to a central point would be much more easily disposed of and at a greater profit to owners than when scatted over a large territory less easy of access.—*Saginaw News.*

MINNESOTA LUMBERMENS'S MEETING.

There was a representative gathering of lumbermen of the Mississippi valley at Beef Slough on Wednesday to attend the annual meeting of the Beef Slough Boom Company and Chippewa River Improvement and Log Driving companies. Officers of the Beef Slough Boom company were re-elected as follows: President and treasurer, F. Meyerhauser; vice-president, Artemas Lamb; secretary, Thomas Irvin.

There were rafted out of the slough last year 450,000,000 feet of logs. There have been turned out to date this year 200,000,000 feet, which is some 50,000,000 or 60,000,000 in excess of the amount rafted a year ago at this time. A small army of men is engaged, the number varying from 500 to 600. The improvements made from time to time, as the business has grown, have been on a liberal scale, President Meyerhauser estimates the investments, together with the flooding dam at Little Falls, at upward of $50,000.

Concerning the log market, prices are about $1 lower than they were a year ago, but the mills are taking all the logs that come out of the slough. The early opening of the season accounts for the increased output over the same date last year. Several sales have been made, the most important being that of R. M. Forseman, who sold 16,000,000 feet, costing in the raft $11. Some smaller transfers are recorded at higher rates.

The annual election of the Chippewa River Improvement and Log Driving company resulted in the selection of the following officers: President, F, Meyerhauser; vice president, O. H, Ingram; secretary and treasurer, S. W. Chinn; general manager, Eugene Shaw.

Some action was taken looking to an extension dam at Little Falls, and the construction of such other dams as are deemed necessary to secure a greater precentage of logs cut. Were this done the effect, it is believed, would be to restrict the cut, as loggers would have a less surplus every winter to take into account in figuring on operations. At present the supply in sight seems, but some heavy operators are still buying, and it is said if the booms at Beef Slough should be compelled to shut down about the first or middle of July, owing to the low water, none of the mills would have enough to carry them for more than three or four weeks The action of the railroads in advancing freights is considered very unfavorable to the lumbermen on the Chippewa, and some of them assert that they will raft their lumber and float it down the river ns formerly.—*Lumberman's Gazette.*

LEAD PENCILS.

With the improved machinery now used 10 hands will make 4,000 lead pencils of the cheaper grade per day. The cedar comes chiefly from Florida, and it is received in slabs of pencil length, one for the lead to go in and the other to cover it, as may be seen by examining the end of any lead pencil. Four little grooves are sawed in the thicker slabs for the leads, which are kept in hot glue, and taken one by one and inserted in the grooves. Then the thin slab is glued to the leaded slab, and, thus united, they are run through a moulding machine, four pencils coming from each slab. After the ends are rasped they are run between grooved wheels at considerable pressure for the only finish they get. This burnishes them, and they are tied in dozens and boxed for sale, mostly in plain wood, and of three degrees of hardness. The graphite used comes in a fine black powder, and is mixed with German white clay, about half and half, and then ground with moisture, forming a paste. This is pressed in dies into lengths of four leads, which are cut and then baked at a very high temperature. These sell at 85 cents a gross, $1.50 and $2 a gross, and are very good articles, writing smoothly and evenly. The manufacturer makes about 100 per cent., selling the pencils at 85 cents a gross, and the retailer makes a good thing selling them at a cent apiece. The graphite costs about 25 cents a pound, and the clay little more than the freight. The more clay used in the leads the harder they will be. The cedar is cut mostly from fallen trees in Florida swamps. *Geyer's (N. Y.) Stationer.*

RUSSIAN TREES FOR CANADA.

In the Imperial Botanic Gardens at St. Petersburg we find the flora of the cold intercontinental climates of Southern Siberia, Northern Turkestan, Mongolia, Mantchooria and Amoor, the nearest climates to our own in the old world.

The work done by the Russians is as useful to us as if done especially for us, and must have the strongest bearing upon our future horticultural progress.

In Russia we find the northern forms of trees and shrubs quite tender if procured through British or American sources.

The English cork barked maple which seldom passes a winter without injury in Montreal, has its northern forms quite hardy in St. Petersburg. The Tartary maple, not to be relied upon when grown from Southern seed, is a native tree in the very cold climate of Moscow. The beautiful agalea mollis, though noted as only half hardy at Rochester, N. Y., when procured from high elevations in the Northern Islands of Japan, is quite hardy at St. Petersburg. The apricot of Southern Asia is less hardy than the peach. It, too, has its northern form which grows in large quantity on the Altai Mountains, and in Eastern Turkestan, and where the natives, the wild boar and the bears fight it out as to who is to have the fruit. In the cold districts of Amoor there are apricots of fine quality which are shipped in quantity to the Pekin Market. The Russian birches are very beautiful and can be easily introduced by seed. The caragana, the commonest shrub in Russia is unknown here. Seed sown at Abbottsford a year ago grew as rapidly as wheat. The Scotch Laburnums cannot endure our winters, yet many northern forms are grown in Russia. Magnolias of certain kinds grow in cold climates in the northern island of Yezo, Japan, giving hopes of success here. In Kazan may be seen the straight trunked silver poplar, a timber tree of decided value. In central and eastern Russia the favorite street trees are Siberian forms of the balsam poplar, planted in preference to the native black poplar, trees of great variety and well worthy of introduction. Also the silver poplar of Turkestan, as upright as a Lombardy; a great acquisition. So, too, is the acutifolia willow, the favorite weeper in the St. Petersburg botanic gardens. Then we have sweet Siberian currants, edible honeysuckles, sweet and seedless verberries, roses that bear a pretty good fruit two inches in diameter, and a host of other things we cannot here mention, whose hardiness is already proved by the climates the Russians have grown them in.

LAKE NIPISSING.

From Our Own Correspondent.

MAY 29.—Owing to the low water in South River, the back drives, consisting of 5,000 pieces of square timber and 70,000 logs, will not likely be got out this season. The square timber belongs to J. R. Booth and Fraser & Sereney, and the logs to Booth and Boyd Bros.

Fraser & Sereney's front drive of 3,500 pcs. square timber and 15,000 logs is clear of South River, being stowed away in South Bay, where a steam saw mill is in course of erection to saw up their logs.

J. R. Booth and D. Moon are sorting their timber and logs at the mooth of South River. Mr. Booth met with a serious loss a few days ago while towing some of his logs over to his railway docks at South East Bay. The boom broke and about 3,000 logs were scattered through the lake.

The first tow of square timber bound for the C. P. R. shipping docks at North Bay left

South River on 26th inst. It belonged to D. Moon and contained a choice lot of timber, in fact there will be nothing in the Quebec market to equal it for quality, manufacture and average combined. This timber was got out for Mr. Moon by P. Cotton, who deserves great credit for the care he has taken in its manufacture.

ASSOCIATION OF LUMBERMEN.

The lumbermen of Northern New York, and the surrounding districts of Pennsylvania and New Jersey, are forming a strong association for the cutting, transporting, manufacturing and marketing of the timber products of the Deleware river region, and as the organization is amply backed with means and resources, the projectors will, no doubt, carry their scheme into successful and profitable execution. Col. Charles St. John, ex-member of congress, and who is identified with vast lumber interests at Port Jervis, N. Y., is the chief spirit in the enterprise, and it is intended to call the organization the New York, Pennsylvania and New Jersey Lumber Producers' and Manufacturers' Association. Among the schemes of the organization is the erecting and operating of an extensive furniture factory, whose location will probably be at Port Jervis. This enterprising and prosperous city is opposite Matamoras, Pike County, Pa., the latter place being one of the principal lumber shipping centres in the Deleware valley region.

No such Word as Fail.—A failure to relieve or cure summer complaints can never be truthfully applied to Dr. Fowler's Extract of Wild Strawberry. All dealers sell it.

Good the Year Round.—At all seasons, when the system is foul and the digestive powers feeble or the liver and kidneys inactive Burdock Blood Bi tters are required.

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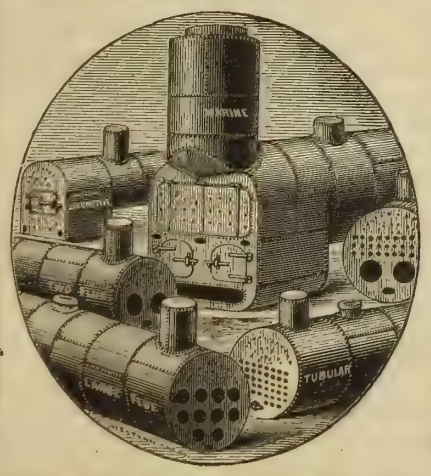
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AMERICAN FORESTRY CONGRESS.

At the last day's session of the recent meeting of the American Forestry Congress held at Washington, the president, Mr. Commissioner Loring occupied the chair. The early portion of the day was devoted to the reading of a series of papers on

THE VALUE AND MANAGEMENT OF GOVERNMENT TIMBER LANDS.

The first paper was by Mr. F. P. Baker, of Topeka, Kansas, who said that in 1880 the government of the United States still maintained 85,000,000 acres of timber valued at $2.50 an acre, which would amount to $212,500,000. The writer referred at some length to the districts in which these lands were situated, and then preceeded to speak of their management, holding the opinion that the extent of the timber lands should be maintained in order that their value may be increased. The forests should be kept, not given away; preserved, not wasted. The timber could be kept growing where it now stood, and be restored where it had been wasted. He concluded an interesting paper by stating that there had been so far nothing that indicated the existence of a plan on the part of the government having for its object the preservation of the forest still under its ownership and control, and making a few suggestions in this connection, among other things that timber lands should be subjected to a different classification from arable lands, and should be surveyed and described; that they should be nowhere sold, as they had been, at $1.25 an acre; that until the land was sold the timber should be carefully protected from spoliation; that a body of foresters should be trained at the schools of forestry and experimental stations to be established and maintained in different parts of the Union by the general government, and by there agencies also the whole theory of the effect of forests on climate, on the flow of streams, and other kindred matters should be carefully studied and the results be made known to the public.

The next paper on this subject was read by Mr. N. H. Eggleston of Washington, who said that the value of timber lands was of two kinds—first, a commercial value, which varied with situation and its vicinity to market and the demand for lumber, and secondly, their value with reference to climate, etc., that no money could represent. He depreciated the fact that the government had put the same value on timber lands as they did on the land swept by blizzards, and took the ground that the government ought to suspend all sales of timber lands, until they ascertained what needed to be preserved and what needed to be sold. He recommended the adoption of the system prevailing in Canada of selling the timber only and of making such rules for the cutting of the trees as not to injure the trees which were left, and so as to keep up a perpetual supply, and said that any possible expenditure for the purpose of preserving our woodlands would be abundantly warranted. The forest product of the United States was valued at $700,000,000 a year, and the following statement would show its value in comparison with other products, in the year 1880:—

Forest crop	$ 700,000,000
Indian corn	679,714,499
Wheat	474,291,850
Hay	371,811,084
Oats	150,243,565
Potatoes	81,062,214
Tobacco	36,414,615
Barley	30,090,742
Rye	18,564,560
Buckwheat	8,682,488
Cotton	280,266,242
Non precious minerals, such as coal, iron, copper, lead and zinc ore	143,894,832
Gold and silver	74,490,620

The third paper was by Mr. B. E. Fernow, of New York, who said that the question whether the government should own and manage forests must be answered "Yes," as soon as it is recognized that forest property is not ordinary property, but by its climatic and meteorological influence it becomes property of a higher order, on which the right of eminent domain must be conceded to the state; or, as the exercise of such right will meet with little favor on the part of forest owners, it is advisable that the state should own and manage such forests, as for their general influence upon the agricultural interest, should be maintained as such. Interesting figures from German forest administrations were adduced to show the value of forest lands there in the way of revenue.

The following motion was then carried unanimously:—

"The American Forestry Congress, having knowledge of the ownership by the general government of 85,000,000 acres of timber lands now exposed to destruction by forest fires started in adjacent private property where the best timber is taken, leaving the tops and brush to feed the fires, which annually spread to the destruction of millions of dollars worth of government timber, therefore,

Resolved, that we deem it the duty of Congress to enact laws with seve-e penalties for the protection of our forests, forbidding the leaving of brush or tops in our wooded domain, which plan is jeopardizing our most valuable timber.

VALUE OF AMEEICAN TIMBER LANDS.

This paper by Dr. Franklin Hough, of the Forestry Division of the Department of Agriculture, chiefly related to the maintenance and production of wood lands by private owners. From the simple and absolute nature of our land titles, the question of forestry in America will hereafter be relieved rrom many preplexing questions growing out of joint ownership by the public and individuals which often occasion much embarrassment in Lurope. The general and the state governments throughout the settled portions of this country and of Canada have conveyed the land to private owners who cannot be interfered with in the management as to planting of forest trees any more than they would be in the raising of grain. It cannot be expected that the owners of land will be influenced by any other motives than their own interests in whatever they may do in the way of planting or clearing, and the first important thing to be done is to convince them of the profits to be derived from the cultivation of broken grounds and waste places and from the starting of woodlands upon worn out fields, as a means for restoring their fertility. The roots of trees strike deep and may reach a soil that is well suited for their growth, although too deep for common geld crops. Whatever tends to promote an interest in rural improvement or the adornment of homes and public grounds, is so much gained in the interest of forestry, and hence Arbor Day, and other measures for interesting the young in these matters, are of great benefit, because the youths now in our schools will in a few years be the owners of all our farming lands. The state governments can aid in various ways, such as the formation of experiment stations, the publication of information, premiums for largest and best results, and exemption from taxation for limited periods. It would be a poor policy to exempt all existing woodlands from taxation, as this would not promote planting. It would give just cause for complaint to the owners of property in other forms. Dr. Hough in conclusion remarked that this was a question of popular education to be promoted by every measure by which an impression can be made.

PRESERVATION OF FORESTS.

Mr. M. C. Read, of Hudson, Ohio, read an interesting paper on "Preservation of Forests on Head Waters of Streams," after which the Congress took recess.

AFTERNOON SESSION.

At two o'clock the Convention resumed, when Mr. R. W. Phipps, of Toronto, the representative of the Ontario Government, delivered an address. He said that he would not, at present, speak of the forestry question as effecting lumber, but of the work in which he had been last engaged, the endeavor to preserve some of the valuable remains of the old forests which are yet found everywhere throughout Ontario. He described the plan, by allowing exemption or bonus to farmers who were willing to preserve their woods and exclude cattle, pointed out its value, and said the Ontario County Councils were about to be communicated with on the matter. He said that other steps were being taken, described the Tree-planting Act, and stated that much was being done by the Ontario Government to disseminate information and form public opinion. He described the manner in which Ontario had been too carelessly deforested, and concluded with a peroration on the forest, which we give:—"What a solitude do a few acres of woodland give you, when the massive and embowering trees have shut out sight and sound. You wish an hour to escape the work-a-day world. All around you are the sounds of busy life—the ploughman is calling hoarsely to his cattle as the share turns the dusty summer fallow—the wagons are rattling along the summer road. You enter the gate of your woodland solitude—fifty yards along the red-brown path, thick with leaf and pine cone, and the outside world is gone—a hundred and the solitude is complete. We are apt, in this rapid life, to allow our minds to dwell too much on the pursuit of imaginary pleasures to come, and to forfeit the real ones of the present, among them that chief enjoyment of the cultivated mind—the opportunity in retirement to study the works of nature, to reflect on the reasons of their being and of our own. Here is the opportunity. Many a fallen tree shall afford you a seat, all around will be many a leafy copse and growing thicket, almost seeming in the summer morning exultant in their branching life. High above are the great leaf-filled arches, around you the great rough-barked trees, solid and massive, each seeming to say, as the wind murmurs through its branches, 'See how we serve and wait.' The air you breathe there, perfumed with pine and balsam, has a healthful influence you will not find elsewhere. Its like cools you not under your broad verandah; it passes you not in the open field. It is the home of contemplation—the birth-place of thought. Here thoughts will arise which arise not elsewhere—each vista of leaf and branch will recall memories which come but seldom, and never come without their charm. If you have children to rear, what an adjunct is such a solitude—what an adjunct to the school is the school of nature. The companionship of the forest—the daily walk in its secluded glades—has aided in forming the women who have charmed the world—the men who have ruled it, for every swaying tree and undulating bough gave images of grace and health to the one—and to the other, every breeze that stirred the tree tops spoke of dangers to be risked, of benefits to be won for mankind, of fortunes to be achieved and dignities and honors to be won. And, passing from the personal to the natural view, our population, pouring from the old world to the new, or drawing the first breath upon our shores, have a duty to be performed in this matter which cannot be gainsaid. We received America a land rich in forest, in stream and in fertile land. We known what ruin the deprivation of forest has brought to other lands; we already see, in vast floods here, in failing fertility there, the premonitions of that ruin in our own. Let us remember that we must not destroy the powers of the land to support those who are yet to come. Along the path we tread they soon shall follow. Let us endeavor to stay the tendency to render that path barren and desolate, and strive to leave it as we found it, blossoming with life and fertility, a remembrance to our successors that in our day we endeavored to perform our duty to the land which supported us, a remembrance than which, had we the choice of the wealth of the universe, we could leave them nothing more valuable.'

Dr. Vasey then read a paper on "The Distribution of Forest Trees in the United States."

In the discussion which followed, the advisability at the present stage of making appropriations for experiments on acclimatizing foreign species in view of the large quantity of different forest species in this country, was referred to.

PLANTING OF TREES BY RAILROAD COMPANIES.

Mr. John S. Hicks, of Roslyn, L. I., read a paper on "Tree-planting by Railroad Companies," which stated that the following tables and figures plainly showed that railway companies should plant trees as well as encourage tree-planting. By the latest estimates there were 113,000 miles of railroad in the United States. The forestry department had prepared under the superintendence of Dr. Hough an elaborate report from companies representing 79,889 miles of the roads, which showed that the average number of ties used per mile of road, single track, was 2,640, the size 6 inches by 8 inches and 8 feet long, average durability 7 years, and costing 35 cents. The kinds most used and the durability of each is as follows:—

	Durbility, years.	*Cost, cents.*	*Cost per year of durability, cents.*
Oak	7	37	5.25
Long-leaf yew pine	6½	37	5.60
Chestnut	7 3-10	42½	5.82
White pine	6 3-5	31½	4.75
Hemlock	5 2-5	25	4.64
Cedar	9 5-5	36	3.67
Tamarac	7 1-5	27	3.75
Cypress	8 7-10	39	4.57
Red wood	11 1-5	40	3.57

This expense per year does not take into account the cost of replacing the least durable. Very little record is had of the yellow locust, its value having been overlooked, taking into consideration its durability, lasting more than twice as long as other woods and that it holds the spikes so firmly. From the preceding table we learn that the cost of ties per mile of single track road is $924, and if renewed each seven years, $132 yearly, or in all the United States $14,784,000. The yearly expense of $132 is the same for sidings and branch lines, the ties decaying before wearing out. Computing each tie to contain 32 feet of lumber, board measure, the yearly amount used is 1,340,000,000 feet. The average number cut from an acre is 100 and the average number of years required to grow timber large enough to cut ties 30 years, which would require 12,672,000 acres of woodland to be kept in constant growth, or in other words it requires 113 3-10 acres of timber growth for each mile of single track road, or a strip over 400 feet wide each side of every mile of single track when double track a proportionately larger amount. It must also be noticed that our railroad system is far from completion, not only in new countries, but in the oldest settled portions are new lines constantly needed, extended and built. The ties also are but a portion of the timber used by railroad companies. Fencing, telegraph poles, bridges, and cars take nearly of not quite as much more, and the demand in this direction is constant. The question thus naturally arises, can our country supply the wants? With many roads, the larger distance that ties must be procured from, the transportation will increase the cost to double the amount now estimated, and the supply must end if not replenished by either railroad companies or individuals. The advantages that railroad companies have for planting are that they have many places where the growth would give the roads protection from snow drifts and windstorms, and many waste places along the line of all railroads are suited for nothing but tree-growth, while other railroads own large tracts of lands only fitted for forests. There is but little land that will not grow timber of some kind to advantage, and forestry culture will teach the best kinds for each locality. The question, at any rate, was one of so great importance that the railroad companies should not delay action, and besides the supply, if planted now, could not be utilized before 30 years time.—*Montreal Gazette.*

PRODUCTION OF MAPLE SUGAR.

At the last day's sitting of the American Forestry Congress, which recently held its annual meeting at Washington, Dr. Franklin B. Hough, of the forestry division, department of agriculture, read a very interesting paper on the production of maple sugar in the United States and Canada, and exhibited a coloured map to represent the relative amount produced by counties as reported by the census of 1880, for the United States and by that of 1880-81 for Canada. It is thus reported to the *Montreal Gazette*; The paper described the various species of maple and other trees affording a sap capable of making sugar—the season, the conditions that favour or hinder success, the primitive methods, and those most approved in modern practice, and statistics from national and state censuses for a long period. The map shows that Vermont, and a broad extent of adjacant territory in the Province of Quebec, afforded the greatest amount of maple sugar; other sections of the country showing a high rate such as certain counties in Northern and South-western New York, the mountains of South-Western Pennyslvania, Northern Ohio, and the north

western part of the lower peninsula of Michigan. The highest rates of production in the world, are found in Portage and Georgia counties in Northern Ohio. Within three miles of Garrettsville, Ohio, there are 111 sugar camps, containing 86,380 trees, or an average of 778 trees each. The largest camp has 3,000 trees, and the smallest 200. In 1883 over 900 tons of maple sugar and 950,000 gallons of syrup were made on the "Western Reserve" in Ohio, the sugar selling at an average price of 10 cents per lb. and the syrup at 80 cents per gallon. The value of "forestry" there at least so far as relates to the maple is well understood, and as much care is taken of these trees as of their choicest fruit trees. In tapping, one three-eighths hole is made in each tree, tin buckets are used, and the most approved evaporators, made of tin or galvanized iron, are used, some being able to evaporate ten barrels in an hour. The secret of success consists in the greatest neatness, and boiling as soon as the sap can be gathered. Dr. Hough remarked that this was a business that allowed of vast development, and that with a choice article the market could scarcely be over-supplied. He mentioned his own experience on a small scale in Lowville, N.Y., where from about 64 trees he got about 300 pounds a year. The trees within his memory were less than 6 inches in diameter; now the smallest is about 20 inches, and the largest 28. We can only quote from his eleborate percentage tables the total results. In the United States the amount of sugar and syrup made (allowing 8 pounds to the gallon) amounted to the following :—In 1840, 33,508,809 lbs. ; in 1866, 52,898,275 lbs; in 1870, 35,812,101 lbs., and in 1880, 50,944,475 lbs. In Canada 3,699,858 lbs. were reported in 1843 in the upper province. Since then it has been as follows :—

	1850-51.	1860-61.
Ontario	2,212,580	6,970,612
Quebec	6,057,532	7,324,147
New Brunswick	350,957	230,000
Nova Scotia	110,411	249,549
P. E. Island		
Manitoba		
British Columbia		
Total	8,731,480	14,774,313
	1870-71.	1880-81.
Ontario	6,277,442	4,160,706
Quebec	10,497,418	15,687,835
New Brunswick	380,004	453,124
Nova Scotia	151,190	217,481
P. E. Island		25,098
Manitoba		2,796
British Columbia		9
Total	17,306,054	20,556,049

LARGE SALES OF LAND.

No better proof of the manner in which the Great Northwest is being filled up can be found than the enormous sales which are taking place of the lands of the Canadian Pacific Railway. A short time ago it was shown that from the commencement of 1884 up to the end of April the sales had been by several thousand acres far in advance of the same period of last year. The Secretary of the Company, Mr. Charles Drinkwater, is now in receipt of the actual sales during the month of May, which aggregate nearly 65,000 acres. For the same period last year the sales only amounted to 1,600 acres, whilst the total sales for last year were 33,000 acres, or just about half the amount sold in April last. The prices realized ranged from $2.50 to 7.50 an acre, or, taking an average of $3, would net nearly $200,000 for that month alone. Hon. Donald A. Smith, who has just returned from England, reports that the interest in Canada is unabated there, the stock of the C.P.R. is be rapidly absorbed by English investors who are taking advantage of the present low quotations, and that in a very short time the stock will cease to be manipulated up and down as heretofore by speculators upon the New York market.

Messrs. Stephen and Abbott sail for Canada on Saturday to attend the adjourned annual meeting to be held on the 14th prox.

Tracklaying on the C. P. R. construction has been resumed at the summit of the Rockies. The terminus for receiving material will shortly be removed to Summit Lake, four or five miles further west than the present terminus.—*Montreal Star (Indep.)*

Subscribe for the CANADA LUMBERMAN.

New Kind of Cement.

A newly patented process makes an excellent cement from a mixture of coal ashes and about ten per cent. of lime or cement. When made with lime it is impervious to water, and withstands a high degree of heat if made from cement and ashes. The cost of gathering the coal ashes, however, will prevent it being made in large quantities.

Nichols and Mills' Failure.

The suspended Albany lumber firm of Nichols & Mills have filed their statement of the firm's liabilities and resources in the county clerk's office of that city, which may prove of interest to creditors of the firm in the Ottawa Valley. The liabilities, as given, are $191,335.20, and assests, nominal value, $48,874.22, actual value, $37,176.54.

Ottawa Timber Trade.

OTTAWA May 30.—Timber and saw logs are coming down very slowly. The only timber passed through the Chaudiere slides so far consisted of 4,758 pieces, or 195 cribs; though the Gatineau boom, 336 logs. Two other rafts are on their way, one comprising 2,162 pieces or 84 cribs, and the other 58 cribs or 1,404 pieces.

THE Kingston *Whig* says that James Wilson, of Calabogie, has sold ten acres of his farm to Boyd Caldwell & Co., as the site of a new saw mill. The Caldwells have large timber limits up the Madawaska River. They will float the timber to Calabogie, saw it and ship the lumber to the United States via Kingston.

CURE FOR DEAFNESS.—As numerous testimonials will show, there is no more reliable cure for deafness than Hagyard's Yellow Oil. It is also the best remedy for earache, sore throat croup, rheumatism, and for pains and lameness generally. Used externally and internally

THE EFFECTS OF WHISKEY.—The effects of whiskey are always evil, and those who feed upon alcoholic stimulants, vainly endeavoring to cure coughs and consumption, but nurse a viper. Hagyard's Pectoral Balsam is a remedy that is always reliable for all throat, bronchial ad lung troubles, and never does harm to any one.

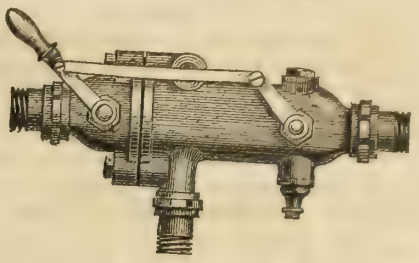
IMPORTANT CHANGES.—There are two periods in the life of every female when the system undergoes great changes. First, the change from childhood to womanhood; next, that of womanhood to old age. These are the critical changes of life, and the system should be nourished and regulated by that matchless tonic, Burdock Blood Bitters. It is invaluable to all diseases peculiar to females.

WANTED AGENTS to sell TUNISON'S
NEW AND SUPERIOR
CANADA MAPS & CHARTS
As paying as any agency in the world. For particulars, full and free, address H. G. TUNISON, 388 Richmond St. LONDON, ONT.

Burdock BLOOD BITTERS.
WILL CURE OR RELIEVE.
BILIOUSNESS, DIZZINESS,
DYSPEPSIA, DROPSY,
INDIGESTION, FLUTTERING
JAUNDICE, OF THE HEART,
ERYSIPELAS, ACIDITY OF
SALT RHEUM, THE STOMACH,
HEARTBURN, DRYNESS
HEADACHE, OF THE SKIN,
And every species of diseases arising from disordered LIVER, KIDNEYS, STOMACH, BOWELS OR BLOOD.
T. MILBURN & CO., Proprietors, Toronto.

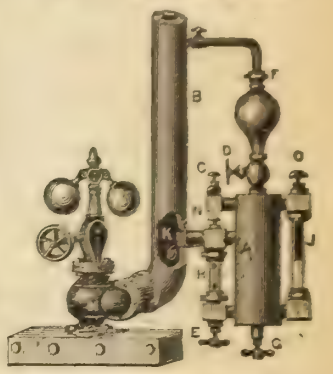
ROBERT MITCHELL & CO.
Montreal Brass Works,
St. Peter and Craig Streets, Montreal.

THE KORTING INJECTOR
Acknowledged to be the Best Boiler Feeder in the World.



Will lift 20 feet, and take water at 150 degrees. Only one handle to start and stop. No valve to regulate. CHEAPER than any other Injector in the market. Also, PATENT EJECTORS for conveying Water or Liquids. CIRCULARS ON APPLICATION.

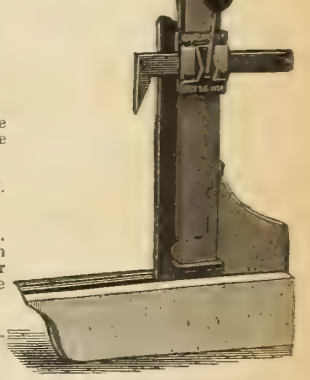
The Continuous Feed Lubricator Saves 50 per Cent in Oil.



HUGH GIBSON,
MANUFACTURER OF
KNIGHT'S PATENT "EXCELSIOR"
SAW MILL DOGS
The Sawyer's Favorite
For Holding Logs upon a Saw Mill Carriage while being Sawn into Lumber.

MISSISSIPPI, June 7th, 1883.
HUGH GIBSON, ESQ.,—Your Patent Excelsior Mill Dogs give entire satisfaction, and is certainly up to your recommendation. They are the best Mill Dog in the market. I am very much pleased with them.
Yours Respectfully,
PETER McLAREN.

BERKLEY, April 20th, 1883.
HUGH GIBSON,—SIR,—The Dogs I bought of you give satisfaction. They beat any Dog that I ever saw for ripping or edging lumber on carriages. They are just the thing for scantling. I would not take $50 for them to-day and have to wait for another pair to come from you, because I believe they make two dollars a day for me.
Yours truly,
2L1y GEO. S. BROWN, JR.



Manufactured by HUGH GIBSON, CHATHAM.

EXCELSIOR DOG.

MACHINERY.
STEAM ENGINES, STEAM PUMPS, STEAM BOILERS, SAW MILL MACHINERY,
Of Every Description.
RUBBER BELTING,
LEATHER BELTING,
MILL SUPPLIES.
SHAFTING, HANGERS, PULLEYS, &c.
MACHINERY SUPPLY ASSOCIATION
Corner Bleury & Craig Streets, MONTREAL.

Market Reports.

TORONTO.

From Our Own Correspondent.

JUNE 9.—Shipments from our docks are not as active as could be wished for, and the plain statement of the case is, our American cousins will not bid high enough for our common grades of lumber and the proportion of good lumber as compared with the common is so small that we have only one cargo now and again fit to ship, so as to meet their requirements. It is true some common stocks have been sent to Oswego, but nearly all such shipments are sent to sell on commission, and will go for pretty much what they will bring. 18 in. shingles also are a drug just now, the figures offered by dealers on the other side will give a living profit to the manufacturer, it is devoutly to be wished for that prices may advance later on in the season.

The trade now being done by retailers is fair as to quantity, but low prices rule the market. Keen competition has reduced prices below that which will give the operators a fair living profit, indeed it is difficult to give quotations that will truly represent the state of the market. In some instances coming under my own observation one dealer has quoted $50.00 below other tenders on a small order of only $475. It is difficult to see how such contracts can be filled other things being equal. Such, however, is the present condition of the retail trade here,—slash and cut is the order of the day. Bakers, grocers and others have much the same price for their wares, but lumber dealers go helter skelter at a gait of their own making.

The N. & N. W. Railway Company have again restored the old rates, so that a car of lumber from Gravenhurst now costs the dealer $21.60, instead of $18 00, the increase being in a corresponding ratio from all points of the line. Many shippers were under the impression that the former rates were too good to last, and the return to the old figures has fully justified their belief, and the sooner the Midland Railway Company stretches out their iron bands and encloses Gravenhurst in her grasp the better pleased will lumbermen be. As matters stand now, lumber for export has the advantage in rates, and why the home consumer should be placed at a disadvantage after expending so much of their means in assisting those roads, it is hard to see, but so it is, and should this company look for help from the various municipalities on their contemplated route to Callender they will find a hard road to travel, for divers and sundry lumbermen will be at their heels to thwart their hopes, of this they may rest assured.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
Scantling and joist, up to 16 ft	13 50
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 00
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	20 00
" " " 32 ft	21 00
" " " 34 ft	22 50@22 50
" " " 36 ft	24 00
" " " 38 ft	27 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	24 00
" boards "	20 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 00
Three uppers, Am. inspection	35 00@40 00

B. M.

1½ inch flooring, dressed	30 00
1½ " " rough	16 00
1¼ " " dressed	25 00
1¼ " " undressed	15 00@15 00
1 " " dressed	22 00
1 " " undressed	16 00
¾ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ₱ M	2 90
Sawn Lath	2 75

MONTREAL.

From Our Own Correspondent.

JUNE 9.—Trade of all kinds is in a very depressed state here at present, and the lumber business forms no exception. There has been no spring boom as was expected. Considerable lots of ash have been bought on account of, and shipped to the United States. Values on our list are unchanged, but there is no doubt more weakness is shown on the part of holders, and buyers making reasonable offers can generally obtain what they want. The building business has so far this season been very quiet. We quote prices as follows ex yard:

Pine, 1st quality, ₱ M	$35 00@40 00
P ne, 2nd " ₱ M	22 00@24 00
Pine, shipping culls, ₱ M	14 00@16 00
Pine, 4th quality deals, ₱ M	11 00@12 00
Pine, mill culls, ₱ M	10 00@12 00
Spruce, ₱ M	10 00@13 00
Hemlock, ₱ M	9 00@10 00
Ash, run of log culls out, ₱ M	20 00@25 00
Bass, " " ₱ M	17 00@20 00
Oak, ₱ M	40 00@50 00
Walnut ₱ M	60 00 100 00
Cherry, ₱ M	60 00@80 00
Butternut, ₱ M	35 00@40 00
Birch, ₱ M	20 00@25 00
Hard Maple, ₱ M	25 00@30 00
Lath, ₱ M	1 75@ 0 00
Shingles, 1st, ₱ M	3 00@ 0 00
Shingles, 2nd, ₱ M	2 50@ 0 00

SHIPMENTS.

Since the date of our last report the shipment of deals for Europe has been going on actively, but there has been a cessation lately, owing to the want of vessels, indeed, to-day there are only some four steamers in port. The barque Memlo has been taken up for the River Platte. Rates of freight continue about $13 to $14. Steamship rates are to Liverpool 45s. to 50s. Shipments recorded at the Custom House since the date of our last report are SS Lake Nipigon, Liverpool, 2,691 deals; SS Colina, Glasgow, 1,799 deals; SS Brooklyn, Liverpool, 21,778 deals; SS Parisian, Liverpool, 17,225 SS Ocean King, London, 10,546 deals; SS President Garfield, London, 50,697 deals; SS Lake Winnipeg, Liverpool, 7,601 deals and 500 boards; SS Somerset, Bristol, 5,533 deals; SS Cynthia, Glasgow, 6,780 deals; SS Vancouver, Liverpool, 11,472 deals; SS Corean, Glasgow, 1,139 deals and 169 pieces pine deals; SS Sardinian, Liverpool, 7,119 deals; SS Malabar, London, 20,993 deals; SS Mississippi, Liverpool, 4,068 deals; SS Manitoba, Liverpool, 4,837 deals; SS Erl King, London, 14,636 deals; Barque Jamet Ferguson, London, 9,015 deals; SS Circassian, Liverpool, 7,854 boards and 773 deals; SS Toronto, Liverpool, 4,638 boards and 2,985 deals.

CORDWOOD.

Wood is steady and unchanged in price, ample supplies hre arriving to meet all demands. Trade is very dull just now, and no new features in the trade worth recording. The present very hot weather does not tend to enliven this branch of business. We quote ex cartage at the wharves as follows:—

Long Maple	$ 6 00
Long Birch	5 50
Long Beech	5 00
Tamarack	4 50

WINNIPEG.

The Winnipeg *Commercial* of June 3rd says: The business of the week in lumber has been fully up to the average of May, and the trade is settling down to an easy regular flow. There has been an easy, regular flow. There has been nothing heard of the reckless cutting of prices prevalent a few weeks ago, and business is steadily reaching something of a paying basis. As yet it is impossible to give quotations of a reliable nature, as prices are ruled to some extent by the magnitude of the contracts to be filled. As matters are now moving the summer's business will doubtless be a great improvement upon that of 1883.

Pine lumber, 1st, common boards, dressed	$26 50
do, 2nd, dressed	25 50
do, 1st dressed rough	26 50
do, 2nd do.	25 50
Sheating, rough	25 00
Timber 16 feet and under	24 00
do. over 16 feet, for each additional 2 feet.	1 00
Dimension and joists 16 feet and under	24 00
do. do, over 16 feet for each	1 00
Fencing	25 00
2 and 3 in. battens	30 00
A. stock boards, all widths	50 00
B. do. do.	45 00
C. do. do.	40 00
D. do. do.	35 00
1st clear, 1, 1¼, 1½, and 2 inch	60 00
2nd do. do. do.	56 00
Window and door casings	50 00
Base boards, dressed	50 00
1st pine flooring, siding and ceiling	40 00
2nd do. do. do.	35 00
3rd do. do. do.	30 00
½ inch split siding, dressed	30 00
Spruce lumber—timber 16 feet and under	22 00
do. over 16 feet for each additional 2 feet	1 00
Dimension and joists, 16 feet and under	23 00
do do. over 16 feet, for each additional 2 feet	1 00
Boards	22 00
1st flooring, siding and ceiling	28 00
XX shingles	5 25
Star A shingles	5 25
X shingles	5 00
A. do.	4 50
Lath	4 50

BOSTON.

Cotton, Wool and Iron of June 7, says:—There is a fair steady call, but at the same time there is little change to note in values or volume of trade. The condition of general business and money matters doubtless checks some building projects that would otherwise be entered upon. The outlook is for a moderate summer's business, with a fairly steady market as to values.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ₱ M	$53 00@58 00
Pine, fourths	53 00@58 00
Pine, selects	53 00@58 00
Pine, good box	22 00@33 00
Pine, 10-in. plank, each	00 42@00 46
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 21
Pine, 10-in. boards, 16 ft., ₱ M	28 00@32 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	16 00@18 00
Pine, 1-in. siding, select	43 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ₱ M	40 00@43 00
Ash, second quality, ₱ M	25 00@30 00
Cherry, good, ₱ M	60 00@85 00
Cherry, common, ₱ M	25 00@35 00
Oak, good, ₱ M	40 00@43 00
Oak, second quality, ₱ M	20 00@25 00
Basswood, ₱ M	25 00@30 00
Hickory, ₱ M	40 00@40 00
Maple, Canada, ₱ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ₱ M	38 00@40 00
Shingles, shaved, pine, ₱ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 4 75
" clear, "	0 00@ 3 25
" cedar, mixed	0 00@ 3 50
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ₱ M	0 00@ 2 75
Lath, spruce, "	0 00@ 3 00

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@25 00
Culls	12 00@14 00

OSWEGO, N. Y.

Three uppers	$44 00@45 00
Pickings	34 00@35 00
Fine, common	20 00@24 00
Common	13 00@16 00
Culls	10 00@13 00
Mill run lots	14 00@18 00
Sidings, selected, 1 inch	30 00@35 00
1¼ inch	30 00@36 00
Mill run, 1x10, 12 inch	17 00@19 00
selected	22 00@26 00
Shippers	13 00@16 00
Strips, 1 and 1½ inch mill run	14 00@18 00
" " " culls	10 00@12 00
1x6 selected for clapboards	22 00@35 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 00@ 3 50
XX pine shingles	2 30@ 2 50
Lath	2 00@ 2 25

CHICAGO.

The *Northwestern Lumberman* of May 31, It cannot be denied that stocks are accumulating at the mills. There is a disposition this season to hold back supplies, which makes it necessary for the buyers to go to the lumber instead of the lumber coming to them. At least such is largely the case around Lake Michigan. While this feature prevails to some extent, yard stocks are not rapidly filling up; there has been, perhaps, less general movement of green lumber this spring than last, which leads to some nervousness on the part of manufacturers. Yet the fair degree of rapidity with which dry stocks have been absorbed is an encouraging sign. At Albany the supply on hand is not excessive, especially of white pine. There is no data to show that the visible supply of lumber is any greater than the country demands. The value of all good stock is very nearly equal to that of last year. Coarse lumber, it is true, has declined, and may go still lower. But the cost of labor and supplies, and consequently of logs, has been less this year than it was last, so that this will partly compensate to the manufacturers for the depreciation of their coarser output.

The arrivals of lumber at this port last week has been on a liberal scale, the cargoes, according to the daily reported post list, numbering 269, a larger number than had put in an appearance during any previous week since the opening of navigation, A larger number of loads than usual has also stopped at the market docks. Shingle receipts continued lavish, as usual, until Wednesday and Thursday, when there was a remarkable clearing off of cargoes, to the astonishment and gladness of everbody concerned.

Quotations on lumber, so far as a market price has been made, are as follows:

Dimension, green	$ 9 25@ 9 75
Boards and strips—No. 2	10 00@12 50
Boards and strips—Medium	12 50@14 50
Boards and strips—No. 1	15 00@20 00
Shingles, standard	1 75@ 2 00
Shingles, extra	2 10@ 2 25
Lath	1 70@ 1 80

Receipts of lumber, shingles, etc., for the week ending May 29, as reported by the Lumberman's Exchange:—

RECEIPTS.	*Lumber.*	*Shingles.*
1884	63,354,000	35,039,000
1883	46,903,000	38,754,000

FROM JANUARY 1, 1884, TO MAY 29, 1884, INCLUSIVE.

RECEIPTS.	*Lumber.*	*Shingles.*
1884	365,364,000	196,858,000
1883	253,555,000	212,474,000
Increase	111,809,000	
Decrease		15,6I6,000

STOCK ON HAND MAY. 1.

	1884.	1883.	1882.
Lumber	289,216,785	300,731,016	294,244,311
Shingles	204,567,875	90,070,344	104,027,305
Lath	27,063,540	22,283,445	10,611,535
Pickets	1,003,416	842,291	1,827,993
Cedar posts	235,493	113,377	159,937

TONAWANDA.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

LONDON.

The *Timber Trades Journal* of May 31st, says:—The same listlessness appears to prevade the market here, and judging by the poor prices most of the goods obtained at Tuesday's sale we should imagine that the tone of activity alluded to by some of the foreign papers must be entirely confined to the other side of the water, for there are very little signs of it here.

That the market now and again experiences a change for the better we are ready to admit, but, unfortunately, these revivals are of short duration, and most invariably leave matters much the same as they were before. It is, perhaps, less satisfactory to see trade take a spurt and then die out again than for it to keep at the same level, as the reaction it apt to carry prices below the line at which they had previously stood. Besides an unsteady market has another disadvantage, insomuch that no fixed price can well be arranged, and both buyer and seller have to take their chance of the moment, a state of affairs that leads to a lot of bargaining which has an unwholesome influence on the free-on-board values, and gives to the market a weak tone altogether out of keeping with the present moderate state of the stocks. We are referring solely to the cargo trade.

Best goods are at all times saleable, but when there is a genuine improvement in the market it is the inferior qualities that become the most inquired for on account of their cheapness. Undoubtedly the tone of prices, influenced by the superior class of wood submitted, was better than we have as yet recorded, as relates to those special cargoes only, but otherwise we fail to observe any change; nor till the shortness of the fall supplies in Sweden and across the Atlantic are fully recognized here will there be any decided alteration in prices. There has been an absence of White Sea and Cronstadt goods from the sales lately, but there will be plenty of them, no doubt, before long.

Thirty-five timber vessels of all sorts were reported in London this week, of which 18 are steamers, a large increase, in proportion, on those employed at this time last year, when out of 40 arrivals only 9 were steamers. This seems strange when we hear that a large and increasing number of steam vessels are out of work, and in fact, "on strike" against the low rate of freights at present prevailing. Of this week's arrivals aforesaid 8 are from Sweden, 9 from Norway, Russia contributes 6, Germany 7, and other countries 5 in all. According to the reputed state of steam-shipping trade those vessels should be less seen in the timber trade than they were last year, but the very contrary is the case. Instead of their being laid up in

unusual numbers, one would think that they were just released from some frozen region where they had been kept out of the market all last year.

LIVERPOOL.

The *Timber Trades Journal* of May 31, says: There is a steady consumption going on at present, and it appears probable that when the statistics of the month are published they will compare not unfavorably with those of previous years. At the same time much of the business is being done on terms all in favor of buyers, some of the prices, especially in pitch pine, being far below the cost of import, and this was made evident at the auction sale on Wednesday, when exceedingly low prices were taken. Upon other articles there is no change in value, save that occasionally some very cheap bargains may be picked up in the way of remnants of stocks or balances of consignments, holders being disposed to clear out at this time of year in order to make way for the spring shipments.

Next week there will be little doing, owing to the Whitsuntide holidays, during which business is almost entirely suspended in Manchester and the manufacturing districts of Lancashire and Yorkshire, and this has had considerable influence in inducing brokers to bring forward their auction sales, of which there are two yet to take place this week.

On Wednesday Messrs. Duncan, Ewing, & Co. offered a cargo of St. John, N. B., spruce deals, birch, &c., timber just arrived, and with a good attendance of the trade, amongst whom were many country buyers, the deals went off freely, and being of good quality, an advance over late rates was obtained. The birch timber dragged a little at the beginning of the sale, but it afterwards moved off with a fair amount of animation. The prices realized were as follows:—

Per Keswick, from St. John, N. B.
12,477 spruce deals, 1st, 2nd, & 3rd.

		£ s. d.	£ s. d.
16 to 32 ft	3×11	7 12 6	7 10 0
12 " 15 "	3×11	7 5 0	7 2 6
9 " 11 "	3×11	6 15 0	
16 " 33 "	3×9	7 0 0	
12 " 15 "	3×9	6 17 6	
9 " 11 "	3×9	6 7 3	
16 " 32 "	3×7	6 7 6	
12 " 15 "	3×7	6 7 6	5 5 0
9 " 11 "	3×7	6 5 0	
19 " 27 "	2½×7	6 5 0	
9 " 13 "	3×5	6 5 0	
14 " 29 "	3×8	6 5 0	
9 " 22 "	3×10/12	6 15 0	
6 " 20 "	3×13/17	7 0 0	
4th		5 0 0	
Ends		5 12 6	

Average price £6 15s. per std.

549 logs birch timber, 14¾ in. average girth.

21 in. & up	26½d.
20 to 21 in.	24d.
19 " 20 "	21½d.
18 " 19 "	20d.
17 " 18 "	18½d. to 18d.
16 " 17 "	17½d.
15 " 16 "	16½d.
14 " 15 "	15½d. to 15½d.
Under 14 in	14d.
Maple	16d. to 14d.
Elm	14d.
Ash	22d.
Beech	16d.

Average price 17½d. per c. ft.

GLASGOW.

The *Timber Trades Journal* of May 31, says:—At the auction sale held here on the 27th inst. there was a good company, but the demand did not indicate an improving state of things, buying being still in a very limited way. The consumption at present appears to be extremely quiet, especially for common deals. Prices are undernoted, and there were also some lots disposed of privately, but large portions of the catalogue were withdrawn.

The first imports of Quebec deals for the season have just arrived per steamers Nestorian and Concordia. The market is at present very bare of first quality pine deals, imports of which would meet with good demand.

The import list for the past week, it will be observed, includes a cargo of Mexican mahogany, now discharging at Yorkhill Wharf, and to be brought to auction, we learn, on an early day.

The 28th of May being removal term here, the week up to that date is encroached on, or taken up in this business generally, to the exclusion of ordinary routine work, engrossing the attention of master joiners and cabinet-makers, so that auction sales of wood are not usually called. The number of removals at this term is said to be large, partly owing to the dull times experienced of late necessitating such changes.

AUCTION SALE.

On 27th inst., at Glasgow, Messrs. Singleton, Dunn, & Co., brokers:—

Quebec 3rd yellow pine deal—	Per c. ft.
12 ft 11×3	1s 1d.
13 " 11×3	1s 0¾d.
16 " 11×3	1s 0½d.
Quebec 3rd spruce deals—	
13 ft 9×3	9½d & 10d.
10 & 11 " 9×3	9½d.
13 " 7×3	8¾d.
12 & 13 " 7×3	8½d.
Quebec 4th spruce deals—	
13 to 17 ft 11×3	3d.
11 " 15 " 11×3	8¾d.
10 " 17 " 10×3	9d.
9 " 17 " 9×3	8¾d.
10 " 17 " 8×3	8½d.
St. John, N. B., spruce deals—	
13 to 15 ft 12×3	9¼d.
13 " 9×3	9½d.
Miramichi spruce battens—	
14 to 26 ft 7×2½	9d.
9 " 13 " 7×2½	8¾d.
Miramichi 1st yellow pine deals—	
9 to 14 ft 7/11×3	1s 5d & 1s 4½d.
12 " 20 " 7/12×2½	1s 5½d.
Miramichi pitch pine—	
10 to 30 ft 9/16×6	1s.
Halifax birch timber—	
14 ⅓ in. avg.	1s. 5½d
Halifax Maple—	
13 in. avg.	1s 4d.

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, May 27, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., N. W., Washington, D. C.:—

299,205.—Clutch—J. W. Dawson, Rushville, Ind.

299,453.—Clutch friction.—J. W. Blodgett, Chicago, Ill.

299,485.—Grate for burning sawdust.—M. J. Lyans, Saginaw, Mich.

299,109.—Journal-bearing.—C. F. Brigham, Worcester, Mass.

299,221.—Journal-bearing—H. H. Hewitt, New York, N. Y.

299,419.—Piles, sinking—R. E. Peary, Cape Elizabeth, Me.

299,344.—Pile driver—G. H. Cavanaugh, Boston, Mass.

299,153.—Planer knife—P. McCourt, Appleton, Wis.

209,480.—Saw gaurd—H. F. Kuhlmann & M. F. Robinson, & E. S. Irvin, Indianapolis, Ind., assignors to National Saw-gaurd Company, Marion County, Ind.

299,194.—Saw-mill circular—R. M. Beck, Chambersburg, Pa.

299,233.—Saw mill circular—W. E. J. Liddell, Charlotte, N. C.

299,142.—Saw segment—J. Hilton, Newark, N. J.

299,349.—Saw-set—G. A. F. Clayton, Masonville, Va.

299,291.—Saw-tooth, adjustable—G. W. Stinebring, Shrev.

190,376.—Skidway—J. H. Given, Philadelphia, Pa.

299,493.—Stave-packing machine—J. H. Overton, Norris, Mich.

299,428.—Tool stock or handle—R. A. Small, Jeffersonville, Ind.

299,190.—Wood-working machine—R. H. Andrews, Washikgton, D. C.

PATENTS ISSUED JUNE 3.

299,896.—Barrel-making machine—S. Wright Egremont, England.

299,570.—Box-nailing machine—F. Myers, New York, N. Y.

299,635.—Carpenters-gauge—G. S. Forrest, Concord, N. H.

299,938.—Clutch, friction—T. Ryan, Lockport, N. Y.

299,653.—Edger, presser-roll for gang—P. P. Lane and J. B. Stanwood, Cincinnati, Ohio.

299,717.—Hammers, nail holding attachment for—G. F. Barber, DeKalb, Ill.

299,694.—Lumber sorting apparatus—W. C. Stetson, Minneapolis, Minn.

299,878.—Measuring aud registering device for planing-machines—J. R. Thomas, assignor to Cordesman & Egan Co., Cincinnati, Ohio.

299,745.—Measuring the lineal feet of work done by a woodworking machine—F. C. Cooke, Whitehall, N. Y.

299,927.—Plane—S. E. Hilles, Cincinnati, Ohio.

299,560.—Saw-filing machine—H. & F. W. Lutts, Malden, Mass.

299,583.—Saw gumming and sharpening machine—S. C. Rodgers and J. T. Barnard, Hamilton, Ontario, Can.

299,699.—Saw handle, crosscut—A. Uren, Seattle, Washington, Ten.

299,940.—Shafting and bearing—T. Sutton, Chebaygan, Mich.

299,619.—Shingle-jointing machine—W. Carson, St. Paul, Minn.

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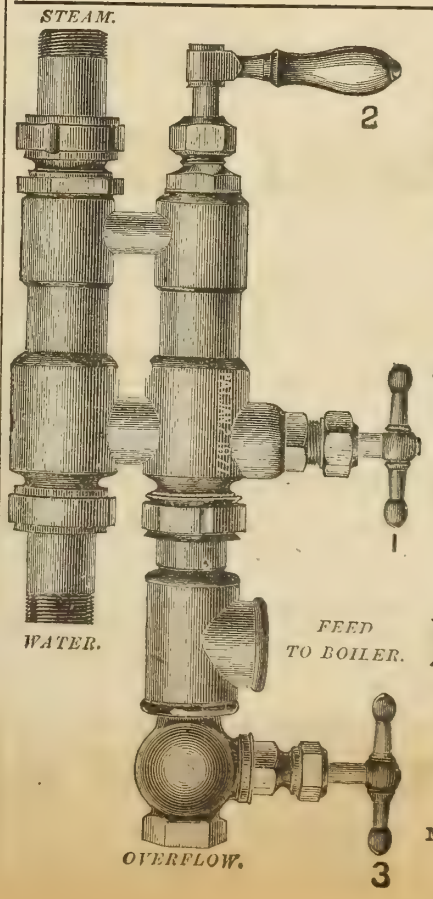
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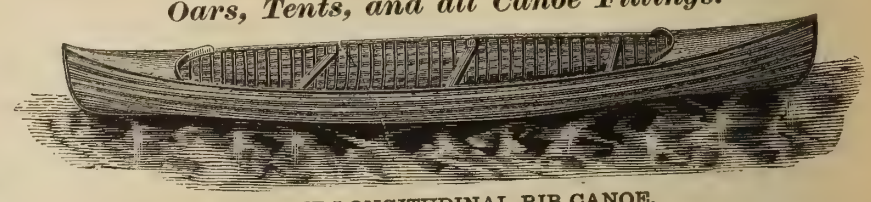
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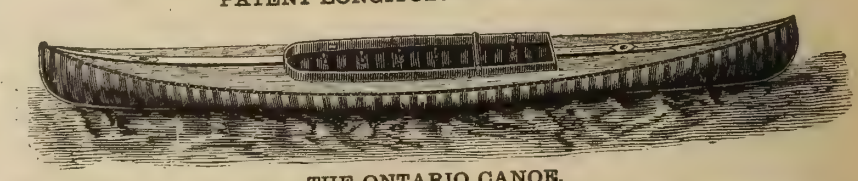
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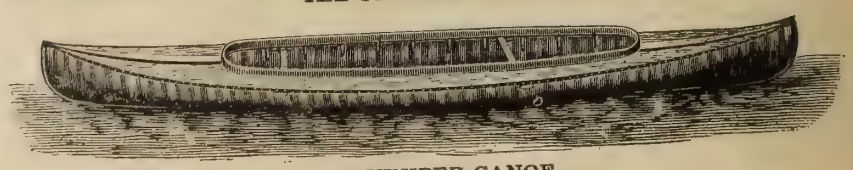
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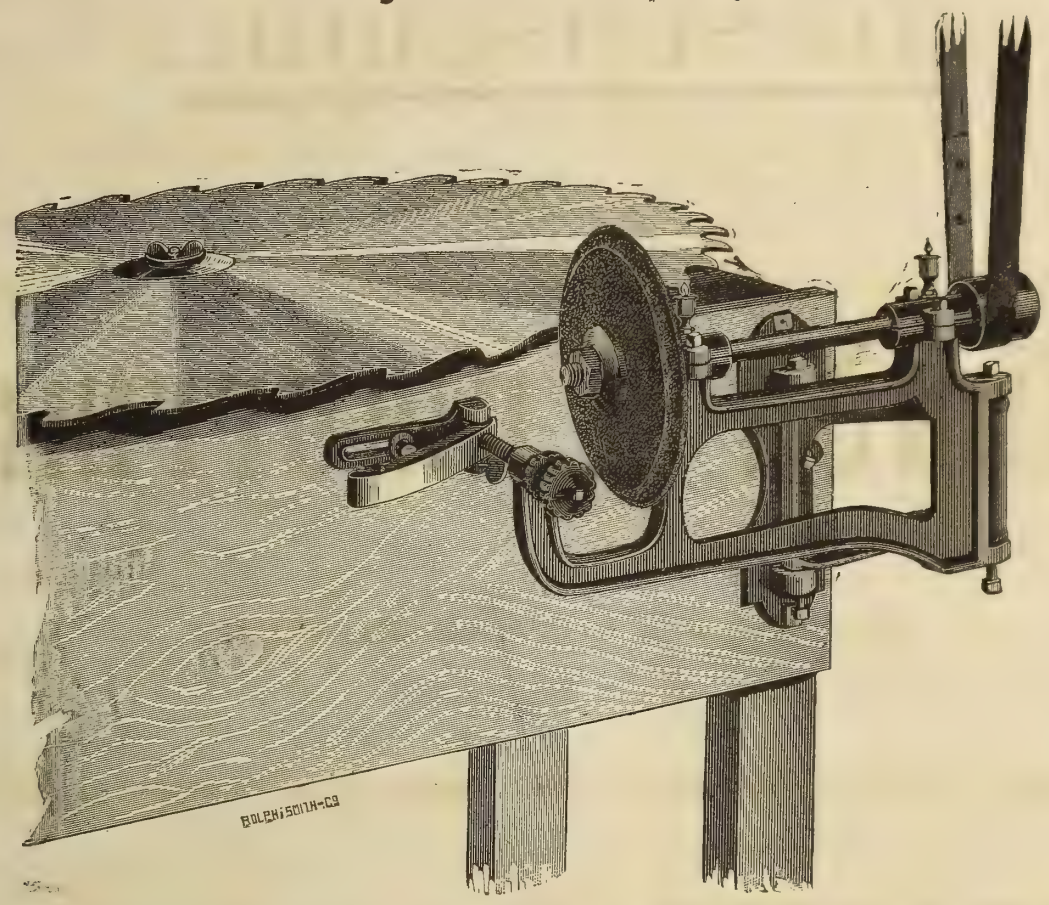
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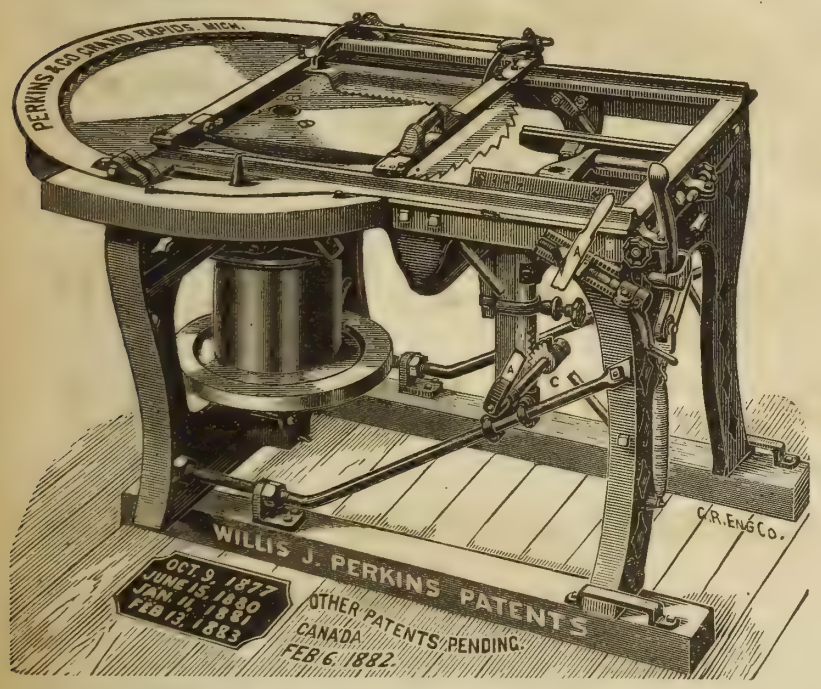
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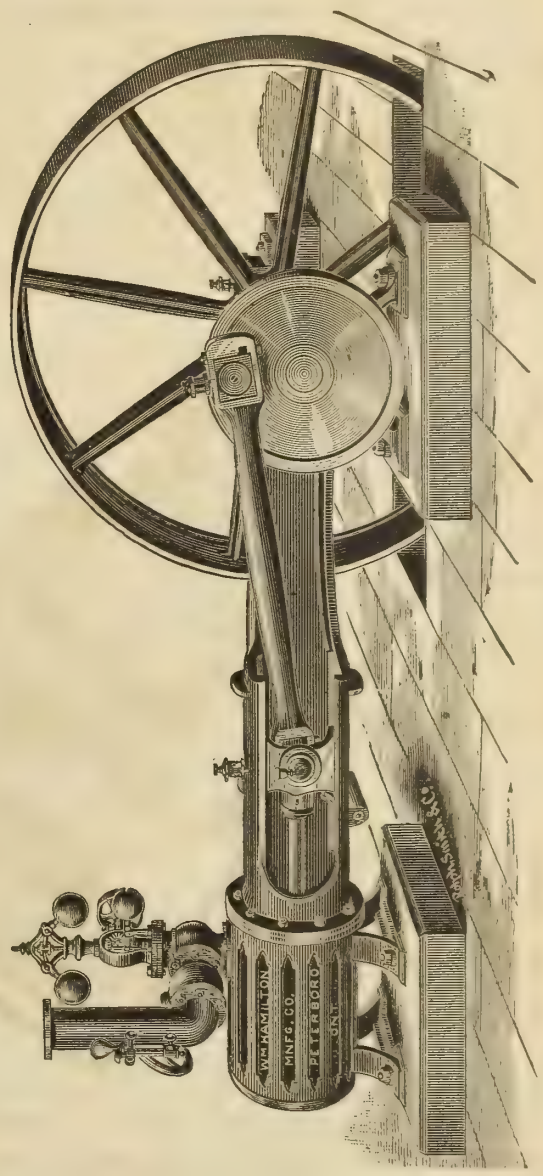
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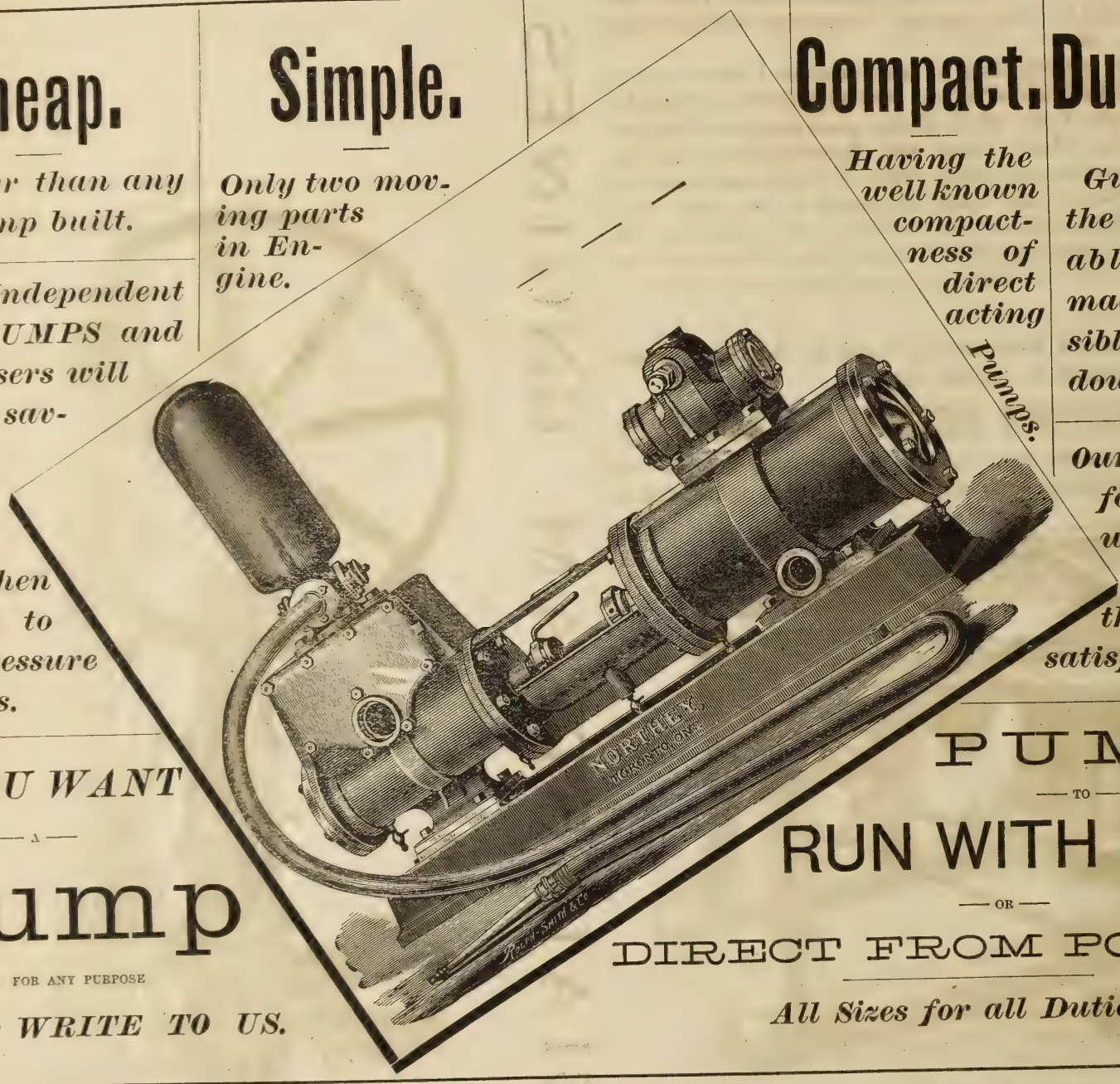
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VOL. 4. PETERBOROUGH, ONT., JULY 1, 1884. NO. 13.

THE LAW OF CONTRACTION AND EXPANSION IN RELATION TO WOOD.

(Written for the Canada Lumberman.)

The expansion and contraction of all mineral substances is governed by heat. The law is that increase of heat increases bulk ; and conversely a diminution of heat is accompanied by diminished bulk. Metal workers necessarily understand this. The scientist by means of his wide range of careful experiments, knows its exact action, and the breadth of its scope, much more fully and completely ; but both are nearly even as to the reason why, and the particular manner by which, this law operates. It would seem that the ultimate atoms of all inorganic matter, whether solid, liquid or gaseous, were kept, in some way, at a certain respectful distance from each other, according to the degree of heat interposed ; and when this heated condition arrives at a certain stage these atoms or particles, become so loosely connected that they begin to flow. Instance, melted iron, the liquid lava flowing down the mountain side, or mercury, or water, which have their fluid condition at ordinary temperatures.

This is the law of expansion as it relates to the inorganic or mineral world. In the animal and vegetable kingdoms, it proceeds on a different principle ; moisture not heat, is here, the controlling power. Here too, our knowledge of the why and wherefore is extremely limited. We are here approaching one of the hidden places of nature's secrets, into which we can do little more than peep and guess. In this case the most obvious conclusion is, that the particles of water (that very common substance, of which we see so much yet know so little) by interposing themseves in and among the cells and fibres of animal and vegetable structures play, to some extent, the role in the organic world, of the increments of heat in the mineral kingdom. The application of heat to wood, or vegetable matter of any kind, instead of expanding shrinks it, this is done by evaporating and expelling the moisture contained in it. This brings us to the practical bearing of our subject ; to the question that interests the lumberman and woodworker : Precisely in what manner, what direction, and to what extent does lumber shrink ? It is generally considered that it does not shrink endwise, and for most all practical purposes this is correct, yet. any one accustomed to hardwood lumber will know by its action in seasoning that it must shrink endwise. Let a number of hardwood scantling be laid close together on the top of a pile, the upper side having the principal exposure, in a few days it will be found that the ends have curved upwards. This will certainly be the case if the heart side of the scantling is laid downwards, showing that the drying process shortens the upper side, and, of course, draws up the ends. Besides, I once saw a clear demonstration, with a thin strip of pine in which the difference of length between the wet and dry conditions was unmistakeable. Still, clockmakers sometimes use wood for their pendulum rods. Red cedar, perhaps, retains its uniformity better than any wood of my acquaintance.

There is another direction in which wood contracts but little, that is radically or in a direct line from the bark to the heart. If we should saw off a short piece of a straight grained hardwood tree, strip it of its bark, measure its diameter and leave it exposed to dry, when fairly seasoned another measurement will show but little change, but the large radial cracks indicate most clearly which way the shrinkage has taken place. The cells and fibres of the wood have closed together circumferentially, and the resistance to a corresponding radial contraction, has been so stubborn that the timber has pulled itself apart rather than allow a reduction of its diameter.

Take another example : Get a piece of green maple, beech or oak, turn it to say five inches diameter; lay away till thoroughly seasoned, then measure again, and we shall still find it close to five inches in the radial direction at right angles to this, the diameter will be reduced nearly one-eighth of an inch. Its oval cross section will be manifest at a glance. Why this is thus would be an interesting question, one which I have no recollection of ever seeing answered. I think the solution will be found in connection with the meddulary rays, which though present in all our northern trees are particularly conspicuous in the grain of the oak, beech and sycamore. They are scarcely distinguishable in balsam, poplar and some other soft woods, which also have correspondingly the character of more uniform shrinkage.

Another important question is, why do boards warp in the process of seasoning? Boards which have the heart of the tree at one edge and the bark at the other do not warp ; what shrinkage they may have is in thickness, not in width. There is consequently no particular tendency to warp. But now let us take a board from the side of a log, say a first or second cut of siding, hang it up if you choose by one end so that the air may circulate freely around it, and it will be free to assume the form which it is disposed to take. When seasoned it will invariably be concave on the side towards the bark and convex on the heart side. This is accounted for by the action we have already referred to—circumferential shrinking. In order to understand its action we must regard the centre of the tree as a fixed point, and lines radiating therefrom as being rigid, and the direction of the shrinkage to be always at right angles to those lines, and as having the effect of diminishing their angles without changing their length ; as a consequence we have the curvature described. This action can be illustrated by a lady's paper fan, which after expanding it to its full extent we take a pair of sissors and clip off a segment. Now allow it to contract slightly and it will be seen that the line of the cut is no longer straight but concave. The methods of piling to a large extent prevent this warping, but it is really only postponed, afterwards when planed, and left free, or if welted and redried, like a criminal set at liberty soon asserts its disposition to crookedness. Some of the patent methods of lumber drying disregard this. It remains to be seen whether or not they win the victory over nature.

Now I imagine the practical readers of the LUMBERMAN asking the question, What does all this knowledge amount to? What can we do about it? Are not our present methods for cutting and handling lumber about the best that can be devised for the present demand? Taken in the main this question can not be squarely negatived. Yet for many purposes our sawing methods are wholly and radically wrong. Mill men are not particularly to blame, they make lumber to make money, and the easiest, readiest way is the best way. The dealer buys and sells with the same object in view. Neither party pays much attention to the fine points, in the science or art of their business, so long as a patient public purchases and pays, but if the house owners do not they might well ask the questions : Is it a necessity, that the siding on our houses must warp, and crack and split; that our floors must have a receptacle for dirt between every board, from an eighth to one-quarter of an inch wide ; also that they must be continually brooming up and peeling, so that no paint will stay on them. Must the baseboards around our rooms be always gaping wide at the floor and where they join the wall, and our doors be shrinking and swelling with every change of the season? It may be said that this results simply from imperfect seasoning, which is largely true, but if the lumber was rightly sawn the seasoning process would not materially change its width or general shape. The general style of sawing in from the four sides of the log, is just the right method to produce warping, shrinking, and changeable boards.

If it is asserted that this is the only practicable method of sawing lumber, we take exception to it, and say it may serve best for many purposes, but for many other higher uses there are better methods. This question of methods will be reserved for another issue.

W. H. TROUT.

Milwaukee, June 9, 1884.

HOUSE BUILDING AND THE LUMBER TRADE.

One of the most encouraging signs of the times to the handlers of lumber is the prevailing house building inclination. There seems to be a kind of house building passion that has possessed the minds of the people. This has materialized in the form of building associations It is a poor little town indeed, these days, that does not have one or more building associations. People who earn their living by sweat of brow or rack of brain have come to think that there is no other so safe a place to keep money as to have it nailed or mortared into solid walls, and covered by reliable insurance. Building associations enable men of moderate income to save a little money every month, which not only earns interest and dividends, but helps to provide money for building homes. More men now than ever before are toiling under the inspiration that these savings give them. Out of the scheme thousands of dwellings and business houses are constantly rising all over this country and the Canadas. If there is no abatement of the impulse—and it is to be hoped there will not be—the building industry cannot but continue prosperous, and the use of lumber and all building material will increase.—*Northwestern Lumberman.*

A Wrinkle.

A subscriber, who has had many years of experience in the lumber business, informs the *Lumberman's Gazette*, that it would be a great preventive of the destruction of timber blown down last fall to peel a narrow strip of bark on the top of every down tree, as it lets the water in so as to prevent the worms from spoiling the timber as they will not work in such cases.

Timber in the South

The south is now making special efforts to develop its lumber industry. Vast regions of "virgin forests" still abound there, and at the coming New Orleans Exposition a full exhibit of the woods of southern forest will be made. Tennessee, Georgia, Alabama. Louisana and Arkansas, will probably be represented. Hemlock, cherry, maple, poplar, chestnut, ash, white and yellow pine, cedar and white and black oak are said to abound in the states mentioned, "with the price of land at a very low figure."—*Lumberman's Gazette.*

Rosewood and Mahogany

Rosewood and mahogany for furniture are gradually coming again into large use. Five cargoes of mahogany arrived at New York week before last and all were quickly marketed. An exchange says that the time is not distant when New York will be the largest mahogany receiving port in the world. This is a commentary upon the changes that have taken place within a comparatively short time. It is but a few years ago since half a dozen cargoes arriving in a month would have overstocked the market. Now as many as that in a week makes no impression on the market, and all that comes forward is quickly absorbed.—*Lumberman's Gazette.*

RELATION OF BUSINESS JOURNALS TO BUSINESS INTERESTS.

At the Lockwood Press dinner, Charles K. Hammitt responding to the toast, "Trade Journals—Their relation to the Mercantile and Manufacturing interests," said:

Trade journals, more or less, intimately concern all present, and doubtless, all that I can say in this connection has already been fully thought over by you. Their existence is in response to the demands of trade, and should they cease to exist, they would leave a void which nothing yet developed could fill.

The duty of trade journals is to point out defects in systems of trade, and advocate policies of improvement; to ferret out and expose what are commonly known as the tricks of trade, and by earnest and constant denunciation to encourage a sentiment of fair dealing; to study carefully the requirements of trade and present plans for its promotion; to collect news of every description from all quarters, select such portions as concern the trade represented, and to present it in a full yet condensed and readable form; to seek channels of trade hitherto unexplored, and point out the advantages of and ways to develop them; to draw together members of trade, and secure co-operation where individual effort would not be sufficiently potent; to suggest methods for a more speedy or more economical method of accomplishing given results; to learn of and give prominent notice to improvements in systems or implements calculated to benefit trade as perfected by specialists; to report the conditions of markets, and record fluctuating prices; to crowd out antiquated wares, and bring forward new and improved styles. This and much other kindred work enters into the duty of the highest type of trade journalism.

Work of this character, vigorously prosecuted, naturally makes the influence of the trade paper very great. Its columns are read closely by those whose interests are of such magnitude as to keep them from searching for themselves through every source of information, to learn what has transpired or is likely to transpire to affect them. The full and condensed form of the information in the trade journal is fully appreciated by them, and the paper becomes to them what the chart is to the mariner—a guide in navigating the sea of commerce.

It is sought after, also, and read closely by the wiser members of trade in all classes, whether manufacturer, distributor or he who sells to the consumer—in fact by the larger and wiser consumers.

In measuring the influence of the trade journal it will be well to consider the character of the men to whom I refer. Numerically, men of this class, in any single trade, represent only a small portion of any one community, but they are scattered throughout the land, and in their respective communities their opinion has great weight for shaping the opinion of their neighbors, not alone on matters of trade and commerce, but on whatever relates to the general good.

Of necessity trade journals meet with people connected with the trades which they represent, who antagonize them and try to belittle their influence as every progressive work strikes the personal interest of individuals and awakens opposition, but these men are careful to learn the contents of trade paper, and are unconsciously influenced thereby, and in common with those who declare their appreciation, seek desired information in its columns. Although, perhaps, it has not been realized, the trade journals of the country have exerted an influence, during the past few years, which has counteracted in advance much of the evils which might have resulted from the recent financial panic in Wall street. The faithful record of the condition and prospects of trade, coupled with the cautions against overtrading and the advice to shorten credits and to avoid excessive indebtedness, acted upon by their readers, has placed the country in such a position that, heavy as this shock was, the mercantile interests have weathered the storm without any important disaster.

A duty of the trade journal not yet referred to, and yet one of its most important duties, is to bring the buyer and seller together. The buyer in reading his paper seeks not only prevailing prices, conditions and prospects of trade, but expects and requires reasonable assistance in directing him to the best sources through which to supply his wants. For this assistance he consults the advertising columns, and this at a time when he is peculiarly alive to his business interests. At such times houses which have shown sufficient forethought and enterprise to secure representation in the advertising columns of their trade paper derive benefit of immeasurable value, even though business do not immediately result, as in the buyer's mind they and their business have become associated with the idea of supplying his present or future wants.

For the convenience of buyers, leading producers and manufacturers congregate in one location, frequently having their places of business adjoining each other so that buyers may complete their purchases without needless delay in going from one to the other; and so for the convenience of buyers, leading producers and manufacturers should constantly keep their card setting forth their business and location prominent in accepted trade journals so that buyers may, without loss of time, find the address and name of any firm wanted. This card should be supplemented by seasonable announcements, attractively displayed, setting forth fully the wares manufactured and ability to meet trade requirements.

The trade journal affords an opportunity for this use not presented by any other medium of any character, because all of its readers are interested parties and possible customers, and few but those interested in a given trade would find its trade journal of interest to them, while in the general press it is only the occasional reader who is interested in trade matters.

The value of reaching the readers of the trade journal as compared with that of other mediums is further increased by the fact that the former buy for hundreds or thousands and the latter buy only for themselves.

Some patrons of trade papers have the idea that money spent in advertising in them is so much of a contribution toward their support, and while they realize the necessity of their existence, they do not recognize their value as mediums of advertising.

The disposition to extend support to trade journals because of their usefulness is commendable on their part, but it is liable to lead to error in that the inferior journal may present the same claim as the superior. Careful preparation of advertising matter accompanied by ordinary watchfulness and proper analysis of results will convince philanthropic supporters of trade papers that those journals which really merit their support bring evidence of their value as advertising mediums fully commensurate with their charges, and they would promote trade interests as well as their own, and secure a higher standard of merit in these journals by patronizing them upon the ground of merit as well as usefulness. Where cheapness in price as compared with others is the reason urged why support should be given, it is safe to assume that support is costly at any price.

Prominent houses sometimes boast that they have always been successful, and that, too, without advertising in trade papers; and while this may be true, it does not follow that they would not have been more successful had they so advertised. Somehow, this boast always reminds me of the aged Christain who, in remarking upon how free Christianity was, boasted that it had cost him throughout his life only 25 cents, and to him his minister, in righteous indignation exclaimed: "The Lord have mercy on your poor stingy soul!"

Evidently the Christain had never learned the beneficial influence upon his own character of giving as God had prospered him, nor the richness of experience of those who recognize that they have entered into His plan, and are fulfilling the part allotted to them in His work. Nor have the houses referred to learned the broadening and ennobling influence upon the character of their individual members by realizing their intimate relations to the fabric of trade and the consciousness that they are fulfilling their part in its development.—*American Stationer.*

Subscribe for the CANADA LUMBERMAN.

AUSTRALIA.

Messrs. Lord & Hughes', timber brokers, monthly circular, dated Melbourne, May 5th, 1884, is as follows:—

Since our circular of the 9th ultimo, we have to report but a moderate demand and few sales; these showing an inactive market and general disinclination to purchase, except at a decline in price that importers would not submit to. Baltic flooring and lumber are weaker, while Baltic deals hardly maintain last month's quotations. All other descriptions of lumber remain at about last month's prices.

Trade sales from yards hardly maintain the activity of the last six months, and show a considerable falling off.

The arrivals have been—Atlantic, from Drammen, with flooring and deals; Corsica, from Puget Sound; Osceola, from Tacoma; Sulitelma, from Hastings, with Oregon timber, laths and pickets; Eillan Denan, from Port Clyde, with spruce deals and laths; Leading Wind, from Boston, Star of Scotia, from New York, with clear pine, white pine shelving, T. and G. ceiling, spruce deals, laths, slates, plaster and cement; Berengaria, Mairi Bhan, Essex, Royal George, Amalfi, Aberdeen, Yeoman, Normanton, from United Kingdom; Caledonian, from Marseilles, with red deals, flooring, slates, lead, galvanised iron, cement, laths and plaster; Devonport, from Kaipara, Albert the Good, from Wanganui, Rio, from Manukau, Vivid, from Mercury Bay, with Kauri; Nemesis, Leura, You Yangs, and Wendouree, from Sydney, with cedar; Victorian, from Adelaide, with galvanised iron.

RED DEALS.—Imports: 1,440 pieces from the Baltic, 4,276 pieces from the United Kingdom. The arrivals have been Atlantic, from Drammen, and Mairi Bhan, from London. On the 29th ult. the cargo ex Andrea Wilhelmina, was sold by auction, and also on the same day a portion of shipment ex Leviathan. Other sales by auction have been, portion of eargo ex Java, and small lines ex Kamfjord, Gurli, and Hans Gude, 11x4, MB brand, realizing 5⅜d.; 9x4, MA, 4 9-16d. to 4½d.; 11x3. TWF, 4 1-16d., FWT, 5d.; 9x3, MARMA, 6¼d. to 6d., MB, 5¼d. to 5½d., FWT, 4½d.; 7x3, DB, & Co., 5¼d., A+M, 5d.; 9x2, AM & S and A+M, 5 1-16d. to 5d., all at per foot of 9x3.

SPRUCE DEALS.—Imports: 6,344 pieces. The arrivals have been—Eillan Donan, from Port Clyde, and Leading Wind, from Boston, and neither of these shipments have yet been sold at auction. Sales have been made of Baltic white deals and scantling, ex Hans Gude and Andrea Wilhelmina.

OREGON TIMBER.—Imports: 2,304,428 feet super. The arrivals have been—Corsica, Osceola, and Sulitelma. The only offering at auction has been ex Corsica, on 22nd ult., when about half the cargo was sold at £6 7s. 6d. to £6 2s. 6d. per 1,000 feet super. The balance of this cargo is advertised for sale on the 6th instant.

LUMBER.—Imports: Clear pine, 203,149 feet super; white pine shelving, 531,425 feet super; T. and G. ceiling, 33,648 feet super. The arrivals have been—Leading Wind, from Boston, and Star of Scotia, from New York. The shipment ex Leading Wind, was offered at auction, when the whole of the clear pine and T. and G. ceiling was sold, and nearly half of the shelving at prices as reported below. The consignment ex Star of Scotia, has not yet been offered at auction.

PITCH PINE.—Imports: Nil. Auction sales. Nil.

REDWOOD.—Imports: Nil. Auction sales. —Nil.

FLOORING AND WEATHERBOARDS.—Imports: 1,692,960 feet lineal. The arrivals have been Atlantic from Drammen, Mairi Bhan and Amalfi from London. Since our last report sales by auction have been made ex Hans Gude, Kamfjord, and Leviathan. The cargo ex Gustave Adolph was advertised for sale on 29th inst., but withdrawn for higher rates than was obtainable on that day. Prices realised during the past four weeks have been as follows: Red, 6x1⅛, 10s. 9d. to 10s. 3d.; 6x⅞, 8s. 6d. to 8s.; 6x¾, 5s.; 6x½, 4s. 10d. to 4s. 6d.; 4-out weatherboards, 6s. 3d.; white, 6x1⅛, 8s. 6d.; 6x⅞, 7s. 6d. to 7s. 3d.; 6x¾, 5s. 6d.; 6x½, 4s. 9d. to 4s. 2d.; 4-out weatherboards, 6s. 3d. to 6s.

KAURI PINE.—Imports: 830,742 feet super. The arrivals have been Devonport from Kaipara, Vivid from Mercury Bay, Albert the Good, from Wanganui, and Rio, from Manukau. Sales by auction have been ex Robbin Hood, and Devonport. Hewn logs realising 11s. 3d. to 10s. 9d.; sawn flitches, 13s. 3d. per 100 feet super.

RED AND WHITE PINE (COLONIAL.)—Imports: Nil. Auction sales.—Nil.

DOORS.—Imports: Nil. Auction sales.—Nil.

LATHS AND PICKETS.—Imports: Laths, 11,752 bundles; pickets, 3,281 bundles. Since our last report sales by auction have been of Oregon laths, 4½ feet, at 38s. to 37s. 6d.; Oregon pickets, at £8 12s. 6d. to £8 10s.; spruce laths, 4½-feet, at 36s. to 35s. 6d.; pine laths, 4-feet. at 32s. 3d.

SLATES.—Imports: 345,822 pieces. The arrivals have been Leading Wind, from Boston; Star of Scotia, from New York; Royal George from Liverpool; Victorian, from Adeliade. The only sale by auction has been of parcel ex Helenslea, from Liverpool, of best blue bangor penrhyn slates, Countess size, at £12 10s.; Duchess size, £17 2s. 6d. per 1,000 pieces.

PLASTER.—Imports: 120 barrels. No sales by auction during the month. Market remains same as last month, at 11s. Auction sales.—Nil.

CEMENT.—Imports: 6,200 barrels. Demand still continues good, and prices remain about the same as last month, namely, 15s. to 16s. for best brands. Auction sales: Nil.

GALVANISED IRON.—Imports: 988 tons. There have been no sales by auction during the month. Best brand are firm at £20 to £21; inferior, at £18 10s. to £19 10s. Auction sales: Nil.

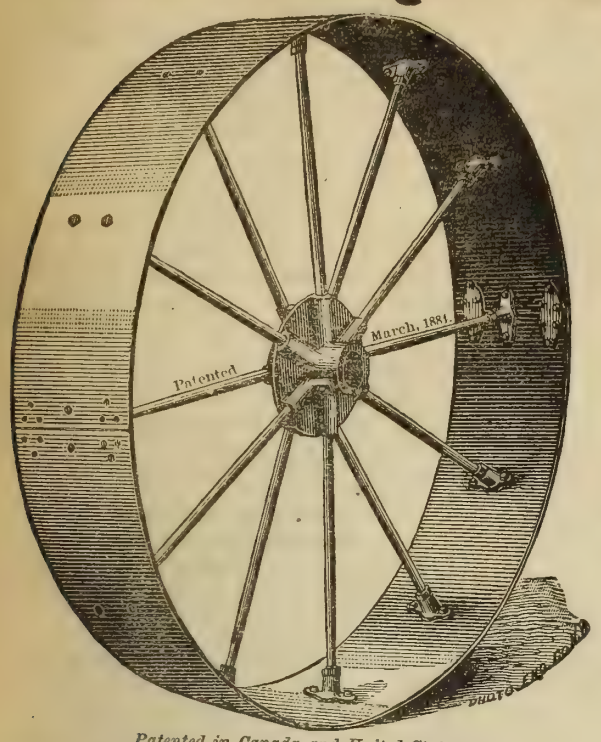
EXPLANATION.—Red deals and spruce deals are sold at per foot of 9x3; T. and G. flooring at per 100 feet running; Oregon timber, redwood, clear pine, shelving, ceiling, per 1,000 feet super; Kauri pine and cedar logs at per 100 feet super; laths, pickets, and slates at per 1,000 pieces.

LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on June 1st, 1883 and 1884, and also the Consumption for the month of May 1883 and 1884:—

	Stock, June 1st. 1883.	*Stock, June 1st. 1884.*	*Consumption for the month of May, 1883.*	*Consumption for the month of May, 1884.*
Quebec Square Pine	112,000 ft.	274,000 ft.	27,000 ft.	73,000 ft.
" Waney Board	108,000 "	211,000 "		
St. John Pine	8,000 "	41,000 "	00,000 "	14,000 "
Other Ports Pine	38,000 "	64,000 "	2,000 "	1,000 "
Red Pine	12,000 "	48,000 "	8,000 "	2,000 "
Pitch Pine, hewn	484,000 "	434,000 "	182,000 "	270,000 "
" Sawn	548,000 "	704,000 "	226,000 "	337,000 "
Planks	60,000 "	68,000 "	11,000 "	30,000 "
Dantzic, &c., Fir	75,000 "	76,000 "	5,000 "	24,000 "
Sweden and Norway Fir	6,000 "	77,000 "	6,000 "	8,000
Oak, Canadian and American	148,000 "	211,000 "	23,000 "	28,000 "
" Planks	190,000 "	201,000 "	32,000 "	52,000 "
" Baltic	20,000 "	12,000 "	0,000 "	0,000 "
Elm	27,000 "	7,000 "	0,000 "	0,000 "
Ash	0,000 "	16,000 "	0,000 "	3,000 "
Birch	46,000 "	58,000 "	59,000 "	35,000 "
East India Teak	33,000 "	45,000 "	34,000 "	3,000 "
Greenheart	130,000 "	63,000 "	8,000 "	4,000 "
N. B. & N. S. Spruce Deals	9,079 stds.	10,830 stds.	3,821 stds.	4,043 stds.
" Pine	780 "	1,836 "		
Quebec Pine & Spruce Deals	4,306 "	5,603 "	1,459 "	1,712 "
Baltic Red Deals, &c.	3,254 "	3,851 "	406 "	375 "
Baltic Boards	231 "	60 "	81 "	— "
" prepared Flooring	5,824 "	3,977 "	2,273 "	952 "

Patent Wrought Iron or Steel Pulleys.



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The Perfect Pulley

ANY SIZE FROM

30 in. to 144 in. Diameter.

4 to 48 in. Face.

SINGLE, DOUBLE or TREBLE ARMS.

SPLIT or WHOLE PULLEYS.

Crowning or Flat Face.

Cannot be burst by Speed or crushed by Belt.

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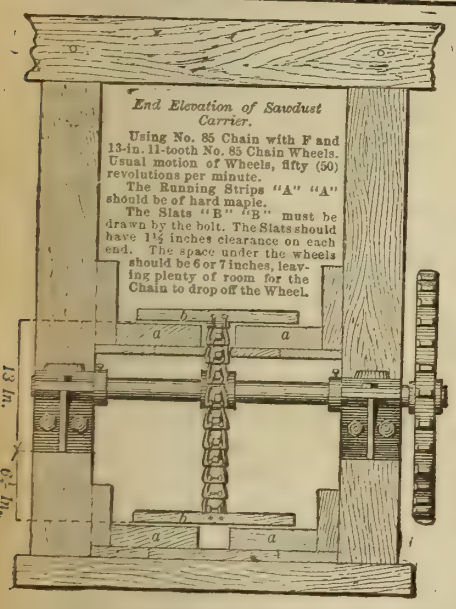
Note the following:

90 inch Pulley,	16 inch Face,		Weight 615 lbs.	
48 "	"	20 "	"	Double Arms 575 lbs.
55½ "	"	12 "	"	Single " 273 lbs.

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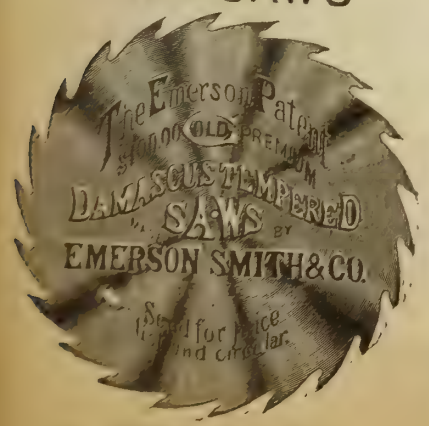
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60 INCH DAMASCUS Tempered Saws, 9 and 10 guage, guaranteed at 800 revolutions or less, six to eight inch feed or less.

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As Strong at Splice as elsewhere, and as even and smooth. A few of the large sizes lately supplied in Canada:—

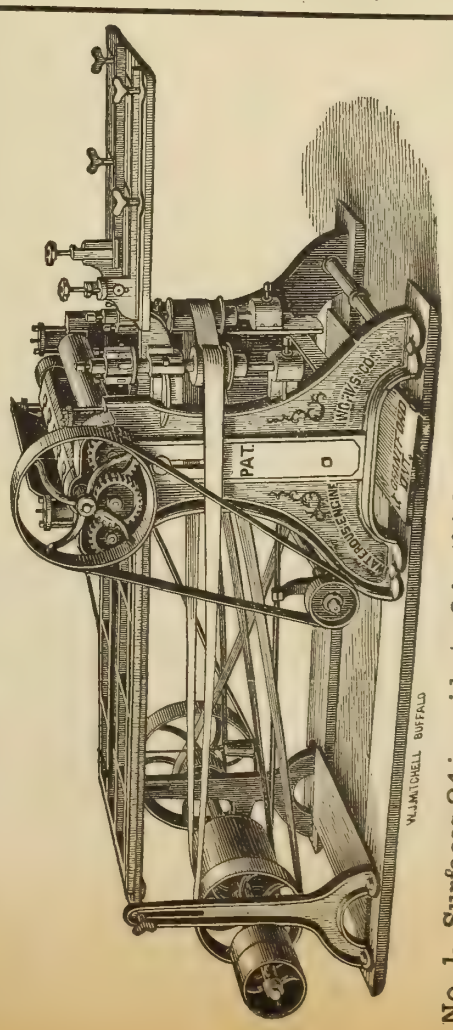
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60	feet,	13	inches	wide,	8	ply.	84 feet, 26 inches wide, 8 ply.	
49	"	18	"	"	8	"	57 " 20 " " 8 "	
49	"	12	"	"	6	"	49 " 11 " " 8 "	
103	"	22	"	"	8	"	47 " 12 " " 6 "	
52	"	20	"	"	6	"	73 " 20 " " 8 "	
101	"	18	"	"	8	"	51 " 16 " " 8 "	
52	"	18	"	"	8	"	37 " 16 " " 8 "	
36	"	12	"	"	8	"		

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BRANTFORD CANADA.

DESTRUCTIVE FOREST FIRES.

The early part of this month must be marked as especially destructive to the lumbering interests of the land, on account of destructive forest fires, which raged in New York and Pennsylvania. Fanned by heavy gales, the fires assumed gigantic proportions for several days, destroying timber, farms and whole villages. Reports from the coal mining town of Arnot, Pa., state that about a score of dwellings and mining stores were burned on May 2. They were ignited by forest fires raging in all that section. At Scranton the barrel mill, press house, and corning mill of the Moosie Powder Company blew up, and the soda grinding and pulverizing mills were fired and burned. The mills were ignited from the forest fires. The company had been fighting the conflagration for several days. One employee was burned to a crisp in the wash house. Near Ashland, Pa., extensive fires were raging, and the Ashland fire department had been ordered in readiness for service at the state miner's hospital. The workmen had to fight the flames near the building. The loss to timber tracts was very large. A heavy windstorm visited Northumberland county, Pa., at the same time, and fanned to increased fury, the forest fires. The works of Charles Woods, and 5,000 cords of charcoal were destroyed. The fires also ignited the Culm bank at the Mine Hill Gap colliery. The mine was at one time in danger, and 3,000 men were likely to be thrown out of employment.

The town of Thompson, in Tioga county, Pa., was wholly destroyed; seventeen houses were burned in Orwell The loss of valuable lumber is immense. Many saw mills, with vast amounts of lumber already made, have been swept away. For long stretches of miles the mountains were on fire. The town of Brisbin was totally destroyed. The fires extended into New York, and in the counties of Tioga, and Montgomery. They also extended into New Jersey. Ralph Bagaley, president of the Arthur Lumber Company, of Pittsburg, on returning from the scene of the conflagration in Elk County, on May 5th, reported the devastation great. He estimated the loss in Elk County alone, at over $1,000,000. The heaviest losers are the mill owners. Hall & Kaull, at Pine Run, $50,000, and Dr. L. M. Otto, of Williamsport, $60,000. The mill of Wm. Goetz, at Swissmount, was entirely destroyed, together with a number of buildings, and a large stock of lumber. Near Emporium, Pa., over 50,000 acres of timbered land was laid waste, and houses and barns were burned to the ground. Near Ashland, Pa., the forest fires destroyed fifty square miles of timber. In the vicinity of Deposit, the fires destroyed nearly all the timber left in this part of the Delaware valley. The dwelling, barns, and saw mill of Stowell Cannon, on Rood's Creek, the dwelling and barn of Jerry Schriver, on the Dry Pond, and the dwelling house belonging to B. E. Hadley, on the mountain, southeast of the town, are reported to have been destroyed.

White Haven, Pa., and the neighboring hills caught fire, and for a time the town was in danger, owing to the strong wind. At California, a lumbering town near White Haven, a fierce fire started, and 11 houses occupied by the men engaged in lumbering, were burned. Two bridges on the Bear Creek branch of the Lehigh valley were destroyed; also the stables of Albert Lewis & Co., lumber contractors; 11 houses also perished, In this fire a large quantity of valuable timber was destroyed. The total loss is estimated at $50,000. Washington, N. J., telegrams said that an extensive conflagration was raging in the Blue Mountains, thirty-five miles from here. The wind carried the smoke in dense clouds over Warren County. At five o'clock p. m., May 2, it became completely dark, and a smoky pall, which was almost suffocating, hung over the town. A large tract of valuable woodlands burned about three miles from Mattawa, N. J., threatening a number of residences. Farmers were able to stop the progress of the flames.

The mountains north and west of the Shawangunks and Catskills, burned, and the flames were fanned into fury by a heavy gale blowing at the time. Near Freehold, N. J.. over 1,000 acres of timber land burned. Of the village of Gilman's depot, N. Y., nothing remained but smouldering ruins.

These are only a few of the disasters of which we recieved the news. As usual, nobody knows how the fire originated, and although these wholesale forest destructions recur every year, the idea of any preventive measure seldom seems to enter the minds of the people. Carelessness and ignorance are, beyond doubt, the all important factors in the firing of forests, as well as of houses and other property, and it does seem high time that something be done for their prevention. The quantity of timber destroyed in this way, has perhaps, never been estimated with anything like care, but the loss amounts to millions of dollars annually, certainly high enough to make it worth while to adopt some kind of preventive measures. The matter is serious enough to admit of careful investigation. To allow forest fires to burn until all the available timber is consumed, or until a rain sets in, is a rather expensive way of dealing with the question. It is no use to fold the hands and ask in despair "What can be done?" But let us be up and stimulate the inventive genius of the country into activity, by letting the public know that the want for some such thing is felt and appreciated, and that any invention or discovery in this matter, will find a ready market and pay well the inventor.—*Lumber World.*

IMPORTS AND EXPORTS OF THE LUMBER INDUSTRIES.

The statistics of the imports and exports of different branches of industry connected with U.S. forest produce, give the following figures: Wood pulp, for paper, was exported in 1883—1,028,027 pounds, value $51,075. It is not distinguished among the imports of 1883, but in 1882 was imported 1,320,383 pounds, value $25,039. Woodenware and house furniture are large exports, reaching $500,000 and $2,500,000 respectively for 1883, both relatively new, and rapidly increasing. The range of distribution is great, England and Australia taking considerable shares, but most goes to American countries southward; chairs are favorite exports, especially to South America. Importations of wooden house furniture are also large, and from a wide range of sources; Belgium, France, Germany, England, Japan, Italy, etc., mostly specialties in art and fancy, however, rather than as commercial supplies. The value so imported was for the fiscal year 1883 $1,690,470. The proportion from Canada was $207,593. The like exports to Canada were $551,683, and to England and Scotland $736,793, including woodenwares. Wooden frames and house-building materials, doors, sash and blinds, are a large and increasing export, especially from the Pacific states to Australia. A new and valuable trade in finished articles is taking the place of the undressed lumber export or beginning to do so. The regular export of sawed lumber for the whole country was $7,835,708 in value for 1883, and of sawed and hewn timber, $3,557,592, both for the calender year. Hoops, staves and headings, cheifly to sugar countries, was 4,962,000 in value. No especial change has recently taken place in these exports, although they are largely increased over former years. In 1866 the sawed lumber was $2,777,919; the timber, $936,787; the sugar stocks $2,365,516, etc., proportions from one-third to one-half only of the present exports. There were no finished house-frames in 1870. The importation of sawed lumber is very large and almost wholly from Canada and the British provinces being $7,582,194 in value for the fiscal year 1883, with $280,905 in shingles and a small amount, $24,302, in timber. Only a small value of finer manufactures of wood is brought from Canada, and $717,760 in value of miscellaneous lumber.—*Lumber World.*

Lake of the Woods.

The Winnipeg *Times* says:—W. W. Banning of the firm of Dick & Banning returned the 2nd of June from a trip to the Lake of the Woods. He says the lumber cut this season has not been nearly so large as the preceeding year, but the quality is superior. He thinks, however, there will be sufficient to meet all the demands. He reports the water as being extremely low, and steamboating is done under a very great disadvantage.

SUPERVISOR OF CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c, measured and culled to June 13:—

	1882.	188.3	1884.
Waney White Pine..	87,440	291,289	175,486
White Pine.....	82,227	119,120	50,590
Red Pine.....	13,951	21,782	88
Oak.....	281,345	235,628	165,877
Elm.....	60,370	21,807	114,706
Ash.....	39,275	7,006	67,838
Basswood			
Butternut.....	554		328
Tamarac.....	29		710
Birch & Maple.....	182,309	125,941	131,983
Masts & Bowsprits...	—pcs	—pcs	—pcs
Spars.....	— pcs	— pcs	— pcs
Std. Staves.....	18.9.1.10	20.9.1.6	16.6.2.22
W. I. Staves.....	178.9.0.22	0.1.3.17	69.8.1.23
Brl. Staves.....	1.7.3.29	21.4.0.4	0.6.2.13

JAMES PATTON,
Supervisor of Cullers.

Quebec, June. 13.

DAMS.

In a stream of moderate size, a form of wier has sometimes been adopted resembling the letter V, with apex or point directed up stream. If built upon piles, with a frame timber forming an inclined plane upon the face of the dam, and filled up with gravel surmounted by a mass or boulder stone, well packed in, the dam will be nearly impenetrable by water. The position of the two arms of the V distributes the force of the water in passing over, and as the currents descending from either side tend toward the centre of the stream, the banks are less liable to be washed away. If timber is abundant, the frame instead of having a uniform slope downward on the face of the dam, may be made in a series of steps like a wide stairway, breaking the water into cascades. The piles for such a dam may be placed at right angles with the current, stayed and covered with plank, and made water-tight with sheet piling supported with foot piles. Constructed in other respects like the one last described, a dam of this kind will possess great durability, and admit of no leakage.

An undue accumulation of water above the dam may be remedied by a channel and sluice gate in one of the side walls, by which the surplus water may be drawn off before reaching the crest of the dam. A self-adjusting dam of heavy planks strongly framed together is sometimes stretched across the stream, connected by hinges to the crest of the permanent dam, and held in an upright position by weights passing over wheels on the abutments. In case of a flood the weights give way partially to the increased pressure, and the auxiliary dam is let down toward a horizontal position, allowing the water to pass unobstructed. In place of an appendage of the kind, movable flush boards are often used, being held in place by pins and other supporters along the brink of the dam and tightly fitted to each other. In time of low water the flush boards of important service in obtaining sufficient head. When the stream rises the boards are removed—though the supports may often remain—and the crest of the main dam being below high-water mark, the surplus water escapes freely.—*Saw Mill Gazette.*

Drying Lumber.

A new process for drying lumber is just now attracting attention. It is said to be the best and most effectual and economical method ever practised. No kiln is necessary, although where a shop has one it can be utilized to an advantage. The process has the great advantage of keeping the surface of the lumber moist during the drying; this holds the pores open, obviates all tendency of cracking and leaves the albumen free to perform its functions. In ordinary kiln-drying the albumen is injured or destroyed, and the surface dries first, thus sealing the juices inside, to escape eventually through cracks caused by the uneven expansion of the wood. Some readers may perhaps be surprised to learn that the process consists in surrounding the wood to be dried with common salt; but those who are acquainted with the peculiar power for extracting moisture which salt possesses will not be at all astonished at this novel and ingenious utilization of this power.—*Builders' Journal.*

Subscribe for the CANADA LUMBER MAN.

The Strongest Timber.

A general impression has existed that slow-grown timber is the strongest, but this opinion does not, it is stated upon highly scientific and reliable authority, stand the test of powerful and practical experiment. There is in London, England, a government establishment for testing the quality and strength of all woods and metals used for government purposes, the chronicles of which are said to be extremely interesting. Among other important things which have been proved there is the fact that fast-grown timber—oak at least—is the strongest and bears the greatest degree of tension. This remarkable fact has also been discovered recently in some of the eastern wood-working establshments, where oak and other fast-grown woods are wrought into furniture, building materials and other commercial shapes that require substantiability and great tension. A prominent stair-builder, who has erected several massive and elegant stairways in the government buildings at Washington, D. C., has informed the writer that timber of a rapid-growing nature is the best for architectural interests he is engaged in.—*Ex.*

Ohio Timber for England.

Persons uot familiar with the trade in timber between this country and Europe, says the Toledo *Telegram*, can have little conception of the vast quantity of oak lumber sent abroad for ship building. This section of Ohio, has produced a fine quality of timber for this use, and for several years Canadians have brought gangs of men here to get out timber every winter. They have operated in Henry, Defiance, Paulding, Van Wert and Putnam counties for 15 years, cutting the finest oaks to be found. The timber is taken to Kingston, Canada, or some other point, and there shipped to the Clyde, and other foreign shipbuilding localities. This trade, in some sections, brings in more money to the people than their crops and often the timber taken from the land is worth more than the land itself. The prospects are that this trade will be quite large the present season, as several roads have large contracts for hauling timber.

Notes About Saws.

The Germans use at the present day among heir furniture makers, carpenters und jointers. thirteen different varieties of saws, each one of which has its own peculiar size of teeth, as well as the different relation of the teeth to each other. How important the thin saw blade is, not only as a means to save power, but also as a means to save wood, can be seen from the following: A log of walnut four meters long, and one meter diameter, cut into twenty pieces by the new horizontal saw frame, saves thirty millimeters of wood, when compared with the cutting of the old-fashioned vertical saws. This is equal to a profit of $9.00 to $12.00. For Germany, where annually 100,000 cubic meters of this wood is used in the various industries, this would represent a saving of $35,000 to $50,000.—*Ex.*

QUEBEC.

The *Chronicle* of June 13 says:—This market has been very quiet. A good raft of white pine, 48 feet square, one-third waney, about 18½ inch, sold at 23 cents. Another raft of 48 feet of good timber was sold at 22½ cents. This raft we understand had 26 cents offered for it when it arrived in 1882. The trade is exceedingly languid, and when the vessels at present in port have cleared off, a very dull season is expected. We hear of sales of oak, elm and ash, but the prices have not transpired. Deals are in good demand, and pine is very scarce.

Rise in the Value of Pine Lands.

Wisconsin pine lands are wonderfully appreciated. A tract of 6,000 acres in Lincoln county, with timber to the amount of 100,000,000 feet, were purchased a few years ago for $11,000, then resold a year since for $60,000, and again recently for $100,000.

MESSRS. Sereney & Fraser are building a saw mill on a beautiful island in Lake Nipissing. It will be a very fine structure, fitted up with every modern improvement.

Electric Light in Mills.

From the way that electric lights are being put in the mills in the different districts, it cannot be inferred that the mill owners intend to run their saws at a slower gait this year than they formerly have. In the construction of these lights great progress has been made in he last two or three years. At first the tremor of the mill caused the light to flicker too much to be certain, but that difficulty has been overcome, and now, if properly adjusted, it is steady, and really makes the mill as light as day. Many of the mill men using it, with whom we have talked, would not dispense with it on any account. If night sawing must be done there cannot be too much light to see to do it well.—*Northwestern Lumberman.*

The Charges on Deals.

The Montreal *Gazette* of June 10, says :—It appears that deal shippers are dissatisfied with the port charges on deals, and claim that a reduction similar to that granted to grain should be given them. We understand that steps are being taken to discuss the question. Already representations have been made to the harbour commissioners to give shippers accommodation for piling deals for export on the wharves. This accommodation, it is stated, has been refused, unless on payment of $2 per foot frontage for the space occupied, in addition to the regular port charges, which are ten cents per 1,000 feet, whether deals be landed or transferred direct from barges to ships. It seems that the port warden's charges on deals are ouble w hat they are on lumber.

A Curious Enterprise.

Southern Florida is being brought into competition with Ceylon, the Malabar and Coromandel coast of India, the tropical islands of the Pacific, the West Indies, and South America, where immense groves of cocoanut trees may be seen. An extensive plantation of cocoanut trees has been started in Dade county, along the southwestern coast of Florida by an enteprising capitalist of New Jersey. One hundred thousand plants have been set out on a tract of about 1,000 acres at a cost of nearly $40,000, and next year the number will be largely augmented. The plants were placed in holes three feet deep and from 20 to 30 feet apart. It requires six years for the trees to begin to yield returns, but it is estimated that in ten years the grove will pay ten per cent. on a valuation of $2,000,000.

Huge Navy Timber.

T. E. Spotswood, the timber merchant, has in his boom the largest stick of timber ever brought to this point, and, perhaps, the largest ever cut in the south. It is a piece of pitch pine, navy timber, 72 feet long and 36 inches square at the ends. It contains 657 cubic feet, equal to 7,884 superficial feet. Its value is roughly estimated at $500. This stick was cut by N. J. Stallworth, of Bell's landing, in Monroe country. Such an example of Alabama's timber wealth should not be exported until it can be exhibited at the New Orleans exposition. Mr. Spotswood has in his boom another large stick also. It contains 400 cubic feet or 4,800 superficial feet. The two sticks together would make a fine exhibit.—*Mobile Register.*

A Hard Working Mill.

The Au Sable Salt and Lumber Company's mill at Au Sable is doing a better business this year than ever before, notwithstanding the record it has made in former years as the John C. Graw mill. Its average cut per week is 1,000,000 feet, and one day last week it astonished everybody by cutting 250,000 feet. The mill has an ample stock of logs and will make, if its customary good luck abides with it, a notable successful season in 1884.

THE Caldwell mill, at Charlton Place, near Ottawa will begin operations immediately. It would remain idle were it not for the late decision in the McLaren-Caldwell case. The Caldwells had over 60,000 logs above Peter McLaren's improvements, which had been detained for two or three years, pending the final decision of the courts. Now the logs will be allowed to come down.

Canada.

Said Mr. John Reade, in his admirable paper, "The Making of Canada," read before the Royal Society of Canada, at Ottawa, lately : "In extent, Canada is the fourth of the great powers of the world. In population, Canada is in advance of about a dozen independent kingdoms and republics. In public works, shipping, commerce, manufactures, industries, Canada is great, and growing daily greater. It ought to be a pride to take part in any way in the making of such a nation, in the development of its resources, in fostering its literature, science and art. We have great scient fic names. We have an academy which has done some creditable work, and, objections notwithstanding, our literature is not devoid of promise. In 1800, when the United States was at our age as a federation and in our stage of growth in population, it had done less in literature than we have done."

Telephone and Telegraph.

"Singular as it may seem," observes the Boston *Transcript*, "the telephone has been the best friend of the telegraph. Just as the elevated railroads in New York increased street travel, and made the horse railroads more profitable, just as electric light educated the eye to light and largely increased the consumption of gas, and just as the use of the telegraph increased the postal revenues, so the telephone has educated the whole country to a more liberal use of all methods for quick communication, and largely increased the telegraph revenues."

Meteorological Influence of Forests.

A forest does cause rain to fall, or at least it does not, as does the open plain, prevent rain from falling. This meteological influence of the forest is due lo the moist condition of the air above the forests, which tends to saturate any clouds moving through this area, thus facilitating precipitation, whilst thc heated air over the plain tends to increase the relative capacity of an air column for moisture, therefore decreasing the chance for discharge.—*Forestry Bulletin.*

THERE is said to be more activity in the English market for Canadian deals than has been the case for some time.

The total amount of forest products shipped from Alpena, Mich., from the opening of navigation to May 31, was: Lumber, 22,750,000 feet; shingles, 1,875,000; lath, 100,000; cedar posts, 74,000; railway ties, 12, 500.

A company of English capitalists have taken hold of the business of the Northwest Timber Co. There will be no change in management, and Messrs. T. H. Carman and J. H. Bell will still be found in charge.

W. P. MCROSSIE, of Kington, has purchased 300 cars of square timber at Calabogie. It will be brought to Kingston *via* the K. & P., rafted and taken to Quebec. Hitherto timber from that district was sent to Quebec *via* Ottawa.

QUITE a large quantity of lumber is arriving at Calgary, the new town toward the western end of the Canadian Pacific Railroad, largely from the Rocky Mountains. That far northwestern country is thus relying on its own lumber resources.

It has been decided to rebuild the Hudson Bay Company's mills recently destroyed by fire at Prince Albert. N. W. T. A gang of men is already in the woods at Edmonton getting out the necessary timber; new machinery will be ordered at once, and it is the intention to have the mill, which will combine all modern improvements, in running order by the 1st of September.

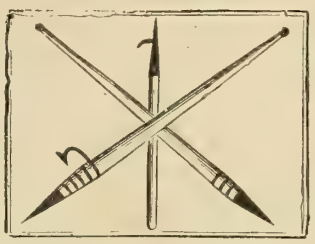
THE large majority of the 6,000,000,000 feet of pine lumber produced in the States of Michigan, Wisconsin and Minnesota is controlled by not exceeding one hundred men or firms, and it is a very simple proposition that a little co-operation between these one hundred and fifty firms would put the log production and lumber market under some sort of control, but it does not seem to work that way.

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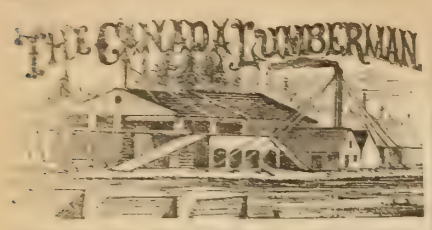
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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

THE CANADA LUMBERMAN is filed at the Offices of Messrs. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., JULY 1, 1884.

About 10,000,000 feet of lumber leaves Ottawa weekly by water for our own, the American and English markets.

Messrs. Boyd, Caldwell & Co. intend building a large saw mill at Calabogie, on the line of the Kingston & Pembroke Railway.

Messrs. Barnet & Mackay have sold their Bonnechere timber limits, of 258 square miles, to Messrs. McLachlin Bros., of Arnprior, for $200,000.

THE Monetary *Times* says:—Maritime Province wood goods are evidently in demand. We are informed that an English house has sent an order for 260,000 boxes and 2,000 gross broom handles.

THE lumber mills at Rat Portage are in motion and expect to turn out a lot of stock. The water in the lake is steadily rising. The new mill of the Rainy Lake Lumber Co. which is being built to replace the one burnt in October last, is fast approaching completion, and when finished, it is said by competent persons, will be second to none in Western Ontario. It is expected that sawing will begin early in June.

MR. W. W. BANNING, of Dick & Banning, has just returned from a visit to the Lake of the Woods in connection with lumbering interests of their firm. The quantity to be cut by all mills this season will be small but the quality will be good. The water in the Lake of the Woods, like that in the lakes of Manitoba, is considerably lower than it was last year.—*Winnipeg Free Press.*

MR. MCMINN is building a steam saw mill on the line of the Kent Northern. The machinery is coming from Brantford, Ontario. James Brown & Co., Weldford, are also negotiating for a site to build a mill in Richibucto. The hemlock bark industry is at present in a rather low condition. An enterprising resident of Kingston is, however, making arrangements to organize a company to compress the bark and ship to England.—*Moncton, N. B., Times.*

DANGER OF FOREST FIRES.

The following letter appears in the Toronto *Globe*:

SIR,—Having heard from a reliable source that the Ontario Government were about to send a party of surveyors to run lines in the vicinity of Jock's Creek, permit me to hereby enter my protest against the propriety of getting surveys done in the pine forests of the Ottawa Valley during the summer months, particularly when such surveys are to be made in close proximity to other valuable limits held by private parties, who acquired them at high prices. I could name a few townships in the immediate vicinity of Jock's Creek which cost hundreds of thousands of dollars, and which were entirely exposed to bush fires. I am aware that the party receiving instructions to survey, also receives from the Department instructions to be very careful of bush fires. But, as an experienced bush hand, I contend that it is almost impossible to the most careful to guard successfully against setting fire in the bush at certain seasons of the year. We all know that men will make smoke to protect themselves from the flies, which are very troublesome during the summer months, and the bush and leaves being very dry the fire will run in spite of the most careful, as it often occurs that water is not near at hand.

I sincerely hope the Department will consider that the Ottawa lumber trade is of sufficient importance to be worthy of some protection against burning up their pine, and if it is urgent, which I doubt, to open up this country for settlement, why not instruct the survey to be made outside of the summer months? Should the Department doubt the feeling here as represented in this letter, I can forward a largely signed petition by the lumbermen of this section praying that no surveys in limits be made during the summer months in order to more effectually guard against the long-standing danger, bush fires.

AN EX-LUMBERMAN.

Ottawa, June 14.

ELECTRICITY.

There is no end to the uses to which this subtle fluid can be applied; as a servant to man no power is of more use, not excepting steam. Perhaps the most useful and beneficial of all its many good qualities is its curative power, as no remedy yet discovered has so wide a range of usefulness. The whole nervous system appears to be susceptible to its influence and is soothed, strengthened and rebuilt by its gentle and invigorating force. The working of the vital system appears to be similar to the working of an electric battery, the acids in the stomach dissolve the food and send its nutritive and vitalizing force through the blood and nerves, and in a very similar manner to the way electricity is sent through the wires of an electric machine, from the battery where it is produced by the dissolving of zinc with acid. These phenomena occur without the least noise or apparent commotion, just as light, a noiseless, steady, but immense force, develops and matures the vegetable world, so electricity quietly develops life with its varied functions. When these functions are deranged and a disease or ailment results, nothing will restore them as quickly and thoroughly as an outward application of electricity, because the vital fluid penetrates to the very centre of the vital organs, and by its direct and induced action causes them to regain their wonted tone. The Electric Belts, Bands and Insoles, manufactured by Mr. A. Norman, of Toronto, stand high in the estimation of thousands, because they convey this grand electric force in the proper way. They impart to the wearer a steady flow of pure electricity for many hours at a time, in so gentle a manner that the most delicate and sensitive can wear them without inconvenience, or the most busy without loss of time; they are durable, last for months, always do good and never any harm. Mr. Norman's Institution has been established ten years, and has proved a blessiug to thousands of sufferers. It is one of the permanent institutions of the country with a steady increase of business from year to year, which shows the growing confidence of the afflicted public in its curative virtue and restoring power. Mr. Norman makes no charge for consultation and will gladly explain his method of treatment, and will send catalogue of his appliances free to any address.

RAFTS ARRIVED.

The Quebec *Chronicle* gives the following list:—

May 26.—Thos. Bucks, waney and square pine, Ottawa cove.

The Ontario Lumber Company, waney white pine, etc., New Liverpool cove.

McArthur Bros., staves New London cove.

May 31.—Flatt & Bradley, waney and square pine, St. Michael's cove.

June 7.—Wm. Simpson, birch, sundry coves.

June 9.—Thos. Bucks, elm, oak, pine, etc., sundry coves.

Sas Gibson, jr., birch, Hadlow cove.

June 13.—R. H. Klock & Co., white pine, &c., Cap Rouge.

J. Francis & Co., white pine, &c., Callabogue Lake.

Collins Bay Co., staves, New London cove.

Caldwin Bros., ash, etc., Cap Rouge.

Thistle, Carswell & Co., white pine, Cap Rouge.

D. D. Calvin & Co., oak and pine, sundry coves.

Flatt & Bradley, oak, elm, &c., sundry coves.

June 16.—D. D. Calvin & Co., oak, etc., Ring's End cove.

P. McLaren, white and red pine, St. Lawrence dock.

McArthur Bros., staves, New London cove.

June 18.—R. H. Klock & Co., spars, Sillery (Dobell').

McLachlin Bros., red pine deals. Cap Rouge.

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, June 10, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., N. W., Washington, D. C.:—

300,193.—Barrel-making machine—M. E. Beasley and E. M. Hugentobler, Philadelphia, Pa., and New York, N. Y.

300,317.—Bit for inserting screw eyes—C. E. Griffith, Storm Lake, Iowa.

300,314.—Blind-slattening machine—S. C. Ellis, Jersey City, N. J.

300,119.—Lumber elevator—J. Paul, LaCrosse, Wis.

300,233.—Saw, drag—J. T. H. Drake, Emporia, Mo.

300,216.—Saw mill—P. M. Chisholm, San Francisco, Cal.

300,322.—Saw, wabble.—S. F. Kress, Moolerey, assignor to A. D. Coye, Hornby, New York.

300,146.—Screw-driver and holder—J. Sinnott, assignor of two-thirds to J. P. Barrett. Chicago, Ill.

300,033.—Stave shaping machine—J. Treat, Hampden, Me.

300,243.—Veneer cutting machine—C. W. & A. S. Gage, Homer, N. Y.

299,984.—Wood ornamentation—J. P. Jamison, Cambridgeport, Mass.

300,099.—Wood-splitting machine—W. T. McCloskey, Westport, Pa.

300,178.—Work-bench, carpenter's—C. A. Williams, Webster City, Iowa.

PATENTS ISSUED JUNE 17.

300,336.—Barrel heads, machine for cutting—S. C. Williams, Liverpool, Ohio.

300,336.—Casks, machine for making heads of—G. H. Albee, Neenah, Wis.

300,384.—Distillation of wood—J. A. Mathiew, Detroit. Mich.

300,437.—Distilling wood, apparatus for—J. A. Mathiew, Detroit, Mich.

300,437.—Log binder—J. H. Benjamin, Saginaw, Mich.

300,405.—Log loader and turner—W. C. Stetson, Minneapolis, Minn.

300,412.—Moulding machine, Wood—M. L. Towle, Concord, N. H.

300,407.—Pile-driver—T. Tangney, New York. N. Y.

300,385.—Retort for carbonizing wood—J. A. Mathiew, Detroit, Mich.

300,399.—Plane—S. R. & A. E. Rust, Pine Meadow, Conn.

300,533.—Planer knives, gauge for adjusting—F. B. Thompson, Beaumont, Tex.

300,582.—Saw, drag—C. Drake, Philadelphia, Pa.

300,369,—Sawing machine, circular—L. Houston, Montgomery station, Pa.

300,536.—Wood uniting—A. H. Walke, Brooklyn, N. Y.

SMALL vs. LARGE MILLS.

In these times of doubtful prices the small saw mill has an increased number of admirers. The claim is that a mill of 50,000 feet daily capacity, or thereabouts, can be shut down, if necessary, at much less expense than one that can cut 200,000 feet every day, and that a mill of the lesser capacity, as the market is now, is large enough for anybody to run. The arguments are not all on one side of this question, unless it is supposed from the first that neither the small nor large mill man has any capital, and in that event it would probably be better for him if he had no mill. An idle saw mill is expensive. The machinery in such a mill depreciates. Everything about the premises gradually goes to decay; and as a matter of course there is more loss in a large mill than in a small one. A crew for a small mill can be recuited in less time than a sufficient number of hands to operate a large one can be secured. These facts are in favor of a small mill. But in times of activity and paying prices it is the big mill that scoops the game. The small one gets left a long way in the rear. If a thousand feet of lumber pays a profit of $5 the more lumber a mill man has to sell the better he is off. In times of less activity, if a reduction of cut is desired, one circular in a large mill can be used while the other remains idle. The circulars can be run on alternate days, and by so doing all of the machinery kept in good repair. A dull time does not scare the man who is running a large mill providing he has plenty of money with which to operate. If he cannot sell his lumber to advantage he can pile it, and there has been no period in the history of the lumber business in this country when a good dry stock of lumber was an elephant, for a great length of time, on the hands of the men who owned it.—*Northwestern Lumberman.*

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c, measured and culled to June 20:—

	1882.	1883	1884.
Waney White Pine..	256,889	732,705	434,342
White Pine.....	846,146	183,659	434,225
Red Pine.....	155,140	23,694	25,71$_3$
Oak.....	404,512	320,899	182,028
Elm.....	76,582	83,561	194,277
Ash.....	75,950	24,359	82,158
Basswood	80		205
Butternut.....	1,210	99	811
Tamarac.....	259	56	1,851
Birch & Maple.....	84,166	128,106	177,653
Masts & Bowsprits...	12pcs	—pcs	—pcs
Spars.....	— pcs	— pcs	32 pcs
Std. Staves.....	59.7.3.10	67.1.3 10	16.6.2.22
W. I. Staves.....	178.9.2.26	18.9,2.2	09.8.1.23
Brl. Staves.....	1.7.3.29	21.4.0.4	0.6.2.13

JAMES PATTON,
Quebec, June. 20. Supervisor of Cullers.

Another Mill.

The Midland *Free Press* of June 19, says:—Nickerson Bros'. saw mill at the head of Hog Bay is now about completed, and will start running the beginning of next week. The new mill will be a great convenience to a large section. We understand that Messrs. Nickerson also intend starting a lumber yard in Midland.

New Mill.

The Lindsay *Warder* of June 20 says:—A. W. Parkins's new saw mill is nearly completed. A large number of men are engaged upon it and in another fortnight it is expected to be in operation. It will be an improvement on the old mill in various ways.

HON. R. HUTCHINSON'S lumber mill at Douglaston, on the Miramichi River, N. B., was burned recently, together with 1,500,000 feet of lumber owned by R. A. & J. Stewart.

The Collapse of Shipbuilding.

After attaining last year to the highest point that it has reached in the history of the industry, shipbuilding in the northeastern ports has in the first three months of 1884 collapsed. It has been definitely stated that there are now about 7,000 shipbuilders unemployed on the rivers Wear and Tyne. If this statement be exaggerated, it must be confessed that there is an enormous falling off in the number and the tonnage of vessels in course of construction. On the Tyne and the Wear the number of the vessels on the stocks is only about one-half of those on the stocks at the same date last year; and at the other shipbuilding ports there is also a falling off, though not quite so marked. Again, out of the vessels on the stocks there are some, the progress of which is stopped; and as others are launched their places are not taken up. It is thus clear that there will be an enormous falling off in the tonnage of the vessels built at the northeastern ports during the current year, and it is probable that the completeness of the collapse will be one of the reasons that lead to the conclusion that the recovery, if not very rapid, will be not so long deferred. The loss of vessels still goes on, and as the work of the steamers has been restricted by the enormous stocks that have accumulated, and as these stocks are now falling off, it may be fairly concluded that the demand for tonnage will recover with more speed than had been thought likely. So complete a collapse as has been witnessed and is being witnessed may lead to a revival in the trade at no very distant date.—*The Engineer.*

Bobbins and Spools.

The Quaco Wood Manufacturing Company, at St. Martin's, N. B., in the midst of spruce and birch forests, began years ago a small rotary mill to make spools and bobbins by hand. Then some Boston capitalists and T. P. Davis enlarged the premises, put in a pair of 125 h. p. engines, and made cloth boards and broom handles also. It did not pay and changed hands. In 1881 the present owners got hold of it and first secured the services of competent bobbin makers from Nashua, N. H., bringing with them a full set of bobbin and spool machinery, and skilled labor to run it. The old building is 120x40 feet with a wing 40x60 feet, and the new building is 60x36 feet, with an ell 35 feet wide, all three storeys. Ships' blocks, pickets, and sheating are added to the other articles made. The cloth boards go to New Hampshire; the bobbins to the different cotton and cordage factories in the Dominion. Large shipments of their products are made to different parts of the United States and England.—*Monetary Times.*

A Terrible Storm.

PITTSBURG, June 12.—The Allegheny valley was visited yesterday by one of the heaviest storms known for many years. At Brookville a waterspout burst, and in 2 hrs. the creek rose ten feet, transforming it into a torrent. Mill men had no chance to save their stock. The dams at North Fork mills, the Bryant & Wainwright, and Litch mills gave way carrying with them lumber valued at $70,000. Two bridges were washed away and many small buildings demolished. A number of families were driven from their homes. A number of coal barges were swept from their moorings here, but were caught by tow boats. Fifty thousand pieces of lumber were swept away at Brookville. The water is now subsiding.

GREAT NEGLIGENCE.—There is great neglect with most people to maintain a regular action of the bowels, which causes much disease. Burdock Blood Bitters cure constipation.

RESPECT OLD AGE.—An old favorite is the remedy known as Dr. Fowler's Extract of Wild Strawberry. Thirty years reliable for cholera morbus, diarrhœa and summer complaints.

DOWN IN DIXIE.—The wife of Mr. J. Kennedy, dealer in drugs in Dixie, was cured of a chronic cough by Hagyard's Pectoral Balsam. The best throat and lung healer known.

GOOD THE YEAR ROUND.—At all seasons, when the system is foul and the digestive powers feeble or the liver and kidneys inactive Burdock Blood Bitters are required.

PLANER KNIVES, Stave Cutter, Stave Jointing, Shingle do, Cheese Box, Veneer Cutting, Paper Cutting, Leather Splitting, Moulding and Tenoning Knives.

Send for Circular Price List.

1yL11 PETER HAY, Galt.

PEMBROKE STEAM SAW AND PLANING MILLS

W. R. THISTLE & Co.

Sawn dimension Timber and Lumber, in White and Red Pine, to order and in stock,

Shingles, Lath, Flooring, Spiles, &c,

Ottawa Office—25 Sparks Street. 6L10

WATER POWER

TO LEASE.

THE UNDERSIGNED having largely extended their raceway at Lakefield, are desirous of corresponding with parties who wish to go into manufacturing, and they are prepared to sell or lease water power on the most favorable terms, or would erect buildings of any size suitable for factories.

R. & G. STRICKLAND

1d86 LAKEFIELD, ONT. w15L9

LUMBER DRYING APPARATUS

A Hawkins' Patent

DUPLEX HEATER

Containing 2000 feet of 1-inch and 2000 feet of 1¼-inch Wrought Iron Pipe, with casing and conducting pipes and a 60-in. STURTEVANT BLOWER, all in complete working order. Can be used either with exhaust or live steam, or both.

This is the latest and most complete method of drying lumber, and will be sold low.—Apply to

T. McAVITY & SONS,

12, King Street, ST. JOHN, N.B.

Timber Limits and Mills

FOR SALE.

Comprising about 300 miles of timber limits, in the counties of Joliette and Montcalm, in the Province of Quebec, bearing Spruce Pine, and Cedar, traversed by the La Marreau, Dufresne, and other rivers.

About 25 acres of land at Montcalm, on the La Warren river, 40 miles from Montreal, with fine water power, saw-mill, store, dwelling and outbuildings,

About 100 acres of land at Charlemagne, at the mouth of L'Assumption River, 17 miles from Montreal, with a steam saw mill of large capacity, manager's house, dwellings for employees, machine shop, bakery, store, wharves, etc., ample facilities for loading vessels. A very complete establishment,

Booms and dams on the various rivers. The whole in running order offers a capital opportunity for doing a profitable business, and will be sold on favorable terms at a low price.

Apply to the

LIQUIDATORS of the EXCHANGE BANK

6L10 Montreal, Canada.

NO SUCH WORD AS FAIL.—A failure to relieve or cure summer complaints can never be truthfully applied to Dr. Fowler's Extract of Wild Strawberry. All dealers sell it.

UNKNOWN TO SCIENCE.—That preparation is undiscovered which can surpass Dr. Fowler's Extract of Wild Strawberry as a cure for cholera morbus, dysentery and Summer complaints.

THE INTERNATIONAL

TENT & AWNING CO.

184 Sparks Street, Ottawa.

MANUFACTURERS OF

LUMBERMEN'S TENTS

The Cheapest and Best in the Market!

THIRTY-TWO FIRST PRIZES & SIX MEDALS AT HALIFAX AND TORONTO, 1883.

Tents, Flags, Tarpaulins, Waterproof Goods, Camp Furniture, etc., etc.

Estimates for Circus Tents, Range Marquees, Hand-made Sails, etc., furnished on application. Liberal Discount to Large Buyers.

PORTABLE CANVAS BOATS MADE TO ORDER

See our Novelties in Camp Furniture!

Send for Catalogue and Price List!

At Toronto, Ont., and St. John, N.B., we made the best Display of Tents ever shown in Canada—and we never substitute an article inferior to sample in filling orders.

We control "THE LATOUR PAT." for Camp Furniture, the best on earth. The only Gold Medal ever given for this class of goods was awarded to the Latour Camp Furniture at Toronto in 1882.

SAIL-MAKING.

We have secured the services of the best practical sail-maker in Canada. Orders in this line will receive prompt and satisfactory attention, as is usual with all orders entrusted to us.

Agency for the WILDERMUTH BED SPRING, the best in the Market.

A. G. FORGIE, MANAGER,

International Tent & Awning Co.,

184 SPARKS STREET, OTTAWA.

24L6

CANADA: ITS LANDS AND ITS FORESTS.

We reproduce with pleasure the following interesting paper from the English *Timber Trades Journal* of June 7th, 1884:

The Dominion of Canada is, doubtless, the most nearly connected with the mother country of all its various colonies, as much from its congenial institutions as from its facility of access, and because it contains within itself all the elements of a great nation in cordial co-operation with its parent state, and rejoicing, without a particle of envy or jealousy, in its pre-eminence. Therefore all that relates to the progress and prosperity of that essential part of our empire interests here at home, and especially in the timber trade; for, though our supplies from other lands are in no danger of failing, there are certain varieties of timber which are considered indispensible here that can only be obtained on a large and liberal scale from the Dominion. Such are pine and spruce, which for years past have been publicly declared to be getting scare and difficult to get at in the settled parts of the country, but which the North-west Territory, as civilization spreads, will be able to supply to this side of the world for ages yet to come.

For evidence of its immense capacity of expansion, and its power of affording occupation for all the spare labor of the Old World, we have only to refer to the pages of a Blue Book lately issued by the Canadian Department of the Interior, and presented to the Dominion Parliament. From this we learn that the land disposed of during the year 1883 for homesteads, pre-emptions, and by sales, amounted to 1,831,882 acres, as compared with 2,699,145 in 1882. The decrease is accounted for by the fact that in the spring of 1882, during the period of inflation experienced in the Northwest, the demand for lands, especially in the Birtle country, was very great and the area disposed of correspondingly large. The subsidence of speculation in these lands last year was remarkable, and a difference of 867,263 acres between the two years shows how much was done in 1882 beyond what was needed for actual occupation, and the sales of last year were more in accordance with the natural progress of the country, and still in advance of any year since the North-West had been incorporated with the Dominion, except that of 1882.

There are at the present time twenty-six colonization companies in the North-West, to whom grants of land have been made of nearly 3,000,000 acres, one-half of which area is open to homestead and pre-emption settlement upon application to the companies, who are for this particular purpose, under their agreements, constituted the agents of the Government.

Fifty years ago, when railroads were in an experimental state, colonization was slow and difficult in Canada, because to be settled in any locality, at a distance from a market town, without roads, or such as were only passable at certain seasons of the year, was like being banished for life; and the occupier and his family were often subjected to privations and miseries, which were sometimes unendurable, and many half cultivated homesteads lapsed back into barbarism from being abandoned by their hopeless proprietors, who could neither live on them, nor find a buyer to relieve them of their unprofitable investments. All this is now entirely changed. Steam and railways have brought distant places nearer together, and lands in proximity to the lines may be obtained within reach of all the advantages of civilization and easy transmission of produce to the nearest market, where in return all the implements and seed necessary to husbandry can be procured without loss of time and labor. These lands have been mostly bought up by the companies above mentioned for the purpose of reselling to emigrants for occupation, and it is stated that, with the view of making their lands as attractive as possible, most of the companies are at their own expense furnishing their settlers with many of the necessary conveniences, such as saw and grist mills, stores and blacksmiths' shops, and carpenters' shops, stage communication and postal facilities where the regular mail service has not already been established. They are also introducing superior qualities of seed grain, thoroughbred and well graded live stock, and improved implements of industry. It is shown by the returns made to the department that generally speaking the expectations of the Government in offering inducements to cattle raisers, to place their stock upon the eligible grazing grounds lying along the base of the Rocky Mountains, have already to a large extent been attained. The rents paid into the department on account of such lands during the last fiscal year amounted to $19,293, which exceeded the whole cash revenue derived from the sales of Dominion lands in any one year down to the close of 1878. The development of the mineral resources of the country is proceeding satisfactorily. In regard to the surveys, the area subdivided into sections and quarter sections during the past season amounted to 27,000,000 acres, equal to 168,750 farms of 160 acres each. Briefly summarized, last season's surveys, as distinct from their technical and scientific results, prove beyond dispute that large tracts of lands represented upon the educational maps, with which the present generation is familiar, as useless desert, are found to be of good quality and suitable for the varied branches of agriculture.

It is evident from the foregoing that a good class of men receive every encouragement to settle on these lands. But so much the more will those who have only their sinews and their good will to offer n the field of labor, be in request, and in the colonies the man who begins at the foot of the ladder is often found in a few years far up towards the top of it, for, as Dr. Johnson said long ago, "few things are impossible to diligence and skill."

It is rather remarkable, however, that in these returns, and in reckoning up to the settler the advantages of his allotment, very little is said of the timber upon it, which, according to the accounts which are current here in the trade, ought to be regarded as a valuable asset of the property. The "grazing lands lying along the base of the Rocky Mountains" are described as "eligible," and have, according to the report, attracted settlers to a large extent, as distinct from forest lands, which require altogether a different sort of occupier. But at any rate there is not that greed among settlers for land well stocked with timber which one would expect from the possession of a commodity which we are gravely told the world will be greatly in want of in *another ten years*. There appears to be always ten years between the prophecy and its fulfilment, and it is just ten years since the whole theory of "forest extinction" was fully explained in our columns by a great Canadian authority on the subject at that date, and in the interval timber produce of Canada has fallen in our markets by at least 15 per cent. Nor need we go far to ascertain how the value stands in the lands of production at this day. Our last number furnishes us with authority on the subject from a witness who would naturally put the best value he could on the staple of his own country.

Our correspondent at St. John, N. B., states as follows:—

"Deals appear to be plentiful, with the supply considerable in excess of the demand. Low prices obtain. I heard of one dealer offering dimension deals (regulars) at the remarkably low price of $8 per mille, which is certainly not encouraging to the producer."

A mille of feet represents a fraction over half a Petersburg standard. Consequently the price quoted would be rather less than £3 4s. per standard, estimating the value of the Canadian dollar as five to the pound sterling; fifty shillings added for freight and another five for charges, these goods might be set down in any of our seaports, ex ship, at about £6 per standard.

Turning now to this side of the Atlantic, our columns naturally abound with different views of the probabilities of trade. One is disposed to think the supply abroad will run short at the latter part of the season. Another asserts confidently that there is every liklihood that the importation will be a very large one. One thing all agree upon, that is great competition, and the difficulty of realizing a satisfactory margin on wholesale transactions.

Nor do our reports from the provinces last week at all modify this general impression, as it is evident the shipbuilding trade, which absorbed last year most of the superfluous stocks imported, is now in a very depressed condition; and a large gap in the ordinary rate of consumption must occur in the ports which chiefly represented that important business; and it is lamentable to see so many industrious men of skill in their handicraft discharged for lack of orders to keep them employed. Formerly the yards had always a ship or two on the stocks on builders' account, to turn the hands on when orders were slack, but now the prospects are so bad that there is no encouragement to do any thing speculatively in that way, and the masters in their own defence have no alternative but to pay off the men for whom they have no longer employment. Our Sunderland correspondent, who may be considered to speak in the name of that trade generally, stated last week that it was going from "bad to worse," to the great injury of the timber interest; and though steam vessels are still plentiful as timber carriers, it is said that in the north the number laid up for want of employment is increasing.

On the whole there is nothing to justify any expectation of a rise in prices as yet. Goods coming in at low freights will cause the old stocks to be offered on very easy terms, and that of itself impinges on the profit of the new. So that to hold its own is as much as the the trade can expect until a more advanced period of the season enables it to judge pretty nearly what the importation is likely to be.

IMMIGRATION.

The *Northwestern Lumberman* says:—There is one feature of this season of progress worthy of account; and that is the fact that the tide of immigration from the old world is comparing favorably with that of former years. The large majority of the thousands of foreigners arriving are going to the newer states and territories to the westward. The effect of this increase of this increase of population, and the settlement of new lands, will be seen within the next year or two in the progress of Dakota, Montana, Idaho, Texas, Oregon and Washington Territory, as well as in Kansas and Nebraska. The Dakota boom is said to have spent its force last year, but it is bound to accumulate a new one. It is always the case that when a new country begins to settle up, the speculators have everything their own way for a year or two, and this is followed by reaction. Afterwards comes the development of substantial progress. The farmers get a start, begin to have produce to sell, improve their holdings, and thus quicken the life of all trade. It is then that the paper towns disappear, and the centres of trade that are really to begin to grow. Dakota has had her speculators' boom, and henceforward will make advance in solid improvement. So it is with the newer sections of all the great West and Southwest. The man who is counting on the present extent of demand for all kinds of commodities, including lumber, as the ultimatum, is making a grand mistake. And the increase is coming much sooner than most men are now counting on, under the influence of these comparatively slow times.

SWEDEN.

The correspondent of the *Timber Trades Journal*, writing from Stockholm under date May 17th, says:—Notwithstanding reports of financial difficulties in both New York and London considerable parcels of redwood of the best shipments from the lower Gulf have been disposed of within the past few days. It is, I believe, correct that amongst other sales one of about 1,200 standards of a leading Gefle mark has been sold to an English house at £11 10s., £9 10s., £6 15s., £5 15s. Prices for battens did not transpire, but are understood to be nearly as good proportionately. Other favorable sales of 2nd class marks have also been made from the Soderham and Gefle districts.

Small sales of whitewood from lower Gulf continue to be reported at £5 10s. to £5 12s. 6d. for 3x9 & 11 deals, and £4 10s. to £4 12s. 6d. for 2½x7 & 6½ battens, both as falling from saw. Sales of Swedish whitewood for shipment from Drontheim are likewise said to have taken place in good sized lines at prices better by about 5s. per Petersburg standard than those above named as now being effected on the Swedish side, account being taken of the difference in freights. These goods are culled from practically the same woods as Sundswall whitewood, and the sales must therefore be taken as an expression of consumers' opinion as to the increased value sawn whitewood has, that has been converted from fresh-cut and unshaken logs, as compared to that manufactured from barked logs that have lain two seasons in the water. Importers who intend to put their whitewood through the planing-mill will, doubtless, in time find it to their interest to pay even 10s. per standard more for unshaken goods than for the usual shipments from the north of Sweden, that are converted from logs that have been lying a long time in the rivers with the bark peeled off. The case that I have referred to constitutes a trenchant argument for the removal of the compulsory barking regulation which now obtains on most waterways of this country, and especially as far as whitewood is concerned, which is subject to such great and increasing competition from not only the Russian Baltic provinces and Finland, but also from New Brunswick and Nova Scotia in Canada. If we estimate the difference in the value of the goods at only 5s. per standard, and the cost of barking at 2s. 9d. per standard, we have a sum of 7s. 9d. per sawn standard thrown into the river for the problematical good of the fishes, who, according to the opinion of one of our most foremost Swedish men of science, are not even thankful for this careful regard of their health on the part of the Swedish authorities.

MOISTURE AND VEGETATION.

In his notes on the glaciers of Alaska, Mr. Thos. Meehan, of Philadelphia, states that he observed on the tops of what are known as "totem poles," in some of the Indian villages, trees of a large size growing apparently in good condition. These totem poles are thick logs of hemlock or spruce, set up before the doors of Indian lodges, carved all over with queer characters representing living creatures of every description, and which are supposed to be genealogies, or to tell of some famous event in the family history. They are not erected by the Indians now, and it is difficult to get any connected accounts of what they really tell. At the old village of Kaigan there are numbers of poles erected, with no carving at all on them, while many are wholly covered, and these all had one or more trees of *abeis sitkensis* (sitka spruce) growing on them. One of these trees must have been about twenty years old, and was half as tall as the pole on which it was growing. The pole may have been twenty feet high. The roots of the spruces had descended the whole length of the poles, and gone into the ground from which the larger trees now derived their nourishment. In one case the roots had grown so large as to split the thick pole on one side from the bottom to the top, and here this root projected along the whole length to the ground, about two inches beyond the outer circumference of the pole. Only in an atmosphere surcharged with moisture could a seed sprout on the top of a pole twenty feet from the ground, and continue for years to grow almost, or quite as well, as if it were in the ground. We may understand by incidents like these how tree-life endures so long in this part of Alaska, and why rocky acclivities, on which no vegetation at all could exist in the dry climate of the Eastern States, are here clothed with a luxuriant fresh growth so thick that is almost impossible to make a journey through it.—*Lumber World.*

Shipping of Great Ports.

During the course of last year 4,379 vessels entered the port of Antwerp, gauging a total of 3,734,428 tons, which places Antwerp, as I have already stated, at the head of European ports. In 1882 the tonnage of Havre was only 2,200,000, that of Genoa 2,250,000, and of Bilbao 315,000, owing to its iron ore exports. Among the English ports a few only exceed Antwerp. London is still the first port in the world, with a tonnage of 10,421,000 tons, and Liverpool the second, with 7,351,000 tons; Newcastle follows with 6,000,000 tons, also in excess of Antwerp, but both Hull and Glasgow are below, with respectively 1,875,000 and 2,110,000 tons.—*Pall Mall Gazette.*

Chips.

THE largest raft said to be ever known on St. Claire river recently passed down from Lake Huron. It contained 3,250,000 feet.

A RAFT of logs belonging to Noyes & Sanger, containing about 2,000,000 feet was broken up in the lake recently, while being made ready to tow to Cheboygan, Mich.

NEWMAN'S mill, on Sharbot lake, near Kingston, Ont., has to be shut down twice a week to clear the eels and other fish from out the sluice and water wheel. The last clearing brought out three bushels of eels, the largest of which weighed 22 pounds.

THE rush to Dakota, Montana, and the territories beyond is greater than last year, It is probable that Dakota will receive an accession of 100,000 to her population this year. She has now about 400,000 inhabitants. A year hence it will exceed half a million.

Two sticks, each 100 feet long, were brought out of the woods at Cadillac, Mich., last week, by A. L. Scaby. They were hewed in octagon form 40 feet from the butt. They occupied three cars, and were photographed. These sticks were bound for Day on, Ohio., and are to be used in raising the soldier's monument in that city, the weight of which is 20 tons and the height 80 feet.

THAT section of the Duluth & Iron Range railroad from Two harbors, on Lake Superior, to the Vermillion Lake terminus, 68 miles in length, is nearly completed. The track is being laid with 63-pound rails, 40 miles having already been laid. Eleven locomotives have been ordered, and six are already on the ground. Ore cars to the number of 325 have been purchased. It is expected that the road will be opened for business about August 1.

A THOROUGH exploration of Alaska is to be made this summer of the resources of that northern territory. The expedition was to start from Portland, Oregon, in the beginning of June, going to Fort Wrangal by steamer, and thence to the mouth of the Copper river by canoe and up the same to its source; thence overland to the Yukon river and down its course to where it empties into the Behring sea. The expeditiou will travel about 5,000 miles and expects to return in October or November. The knowledge which will be obtained of the resources of Alaska cannot be estimated at present.—*Ex.*

THE timber trade of Hamilton is much smaller this season than last. McArthur Bros. and Mr. McRae are doing little, and Mr. Murphy, of Quebec, is shipping instead of rafting. Flatt & Bradley are rafting, but not to such an extent as last year. The rate from Hamilton to Garden Island or Collins' Bay is $22, which is about $13 less than what used to be considered a fair figure. The low rates are a result of the fierce competition of the railroads with the vessels. One timber merchant says that the railroads offered to carry his timber from where it was cut up north to Quebec for very little more than it costs to raft it and send it by the lake or river.—*Ex.*

ANYWHERE to strike Lake Superior seems to be to be the policy of the railroads in Northern Wisconsin and Minnesota. Instead of concentrating at Duluth, as that aspiring manifest town desires, the roads go for the lake wherever deep water and sheltered position is obtainable, the Northern Pacific and St. Paul and Manitoba at Duluth; the Chicago, St. Paul & Omaha at Superior, Washburn and Ashland; the Wisconsin Central at Ashland, the Milwaukee, Lake Shore & Western at Ashland and Washburn. Now it is announced that Dalrymple, the great wheat grower, is yearning for an outlet on Lake Superior, and is planning for a three mile spur track from the Omaha road to a point on the lake near Bayfield, where he proposes to have dockage and elevators of his own. Thus it is that the metropolis of Lake Superior is inclined to scatter along the shore. At no distant day in the future some one of the points that have become or are to be outlets on Lake Superior for northwestern traffic will become paramount enough to draw the others unto itself, and then all roads will have to lead to this new Rome.

THE UPPER OTTAWA DRIVE.

A prominent lumnerman who has just come down from the Upper Ottawa informed a *Free Press* reporter that, in the early part of the spring, lumbermen were unanimous in the belief that the water in the Upper Ottawa would maintain an unusually high level, and that operations would be much easier than they had been for many years past. But contrary to their most sanguine anticipations, the water began to fall before its usual time. The Ottawa this year did not rise within three inches of its last year's level, exhibiting a low average in all the tributaries. It commenced falling over a week ago, and has already fallen six inches. This sudden falling is causing much anxiety and inconvenience to lumbermen doing business along the Upper Ottawa. He stated that on the Colonge the timber and logs of Messrs. R. and J. White are stuck and have been abandoned. Mr. Richard White was in charge for a month past, and if there had been any chance of coming out he would scarcely have left it. It looks very much like as if there had been no rain up there this spring. On the Schyan, Mr. John Rowan has also been unsuccessful in coming out. Nearly all of this year's drive and part of last are stuck fast, and most of his dams broken away. Bronson & Weston on the same stream have been about the most fortunate of any of the lumbermen, and succeeded in booming out all their drive, although they have been delayed over a week through a dispute with Mr. Alexander Fraser, of Westmeath. Perley and Pattee's Chalk River drive was put into the Fort William boom last Monday. Mr. W. H. McAllister's raft of dimension timber is already well on its way down the Ottawa. Mr. McAllister sold a portion of his logs to Messrs. Perley and Pattee and Jas. McLaren. His Snake River drive will come down so soon as the logs in the front are clear.

Hemlock Bark.

The Ludington *Appeal*, which occupies a vantage ground in reference to observations about hemlock bark, Ludington being the largest shipping point for this product on the east shore of Lake Michigan, remarks as follows concerning the present outlook: "Heretofore there have been many farmers who have realized quite a handsome profit in getting out hemlock bark. This is generally done during the interval when farm work did not demand their attention, and the money so realized served to bridge the time between sowing and reaping. This year there is not much liklihood of anything of any amount being done in this line, owing to the light demand of the tanneries across the lake and elsewhere. Last season's low prices allowed them to stock up heavily, and as a consequence there is but little call for bark this year. Local buyers will not pay to exceed $4 on the cars along the line of the Flint & Pere Marquette railroad in this county, and $5 delivered on the docks in this city. Very little is being bought at these prices, buyers preferring to wait and see more clearly what the fall demand is likely to be."

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain and cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup for children teething. Its value is incalculable It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentery and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system, Mrs. Winslow's Soothing Syrup for children teething is pleasant to the taste, and is the perscription of one of the oldest and best female nurses and physicians in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

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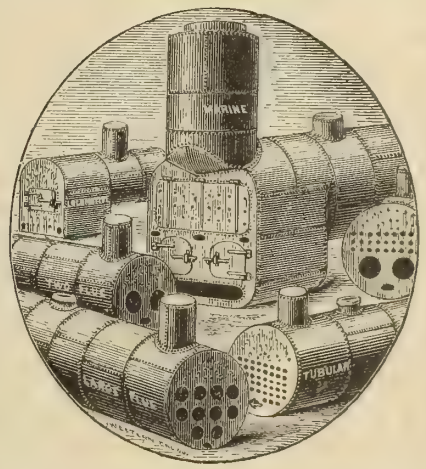
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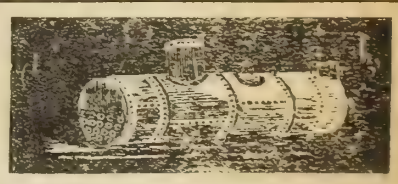
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Market Reports.

TORONTO.

From Our Own Correspondent.

JUNE 24.—Carload lots of the lower grades of boards still continue to drop in price. Good mill run boards, free from rot, but culled for other defects, and that were considered good value by retail dealers in the early spring at $9.50 per M., can now be bought at $8.50 and sometimes at $8.00 per M. on the cars here. The better grades hold their own and will continue to do so during the remainder of the season. Bill stuff also, as predicted in my earlier letters, maintains the same figures $11.50 by carload, for lengths up to 16 feet, and 50 cents extra for every two feet in length above 16 feet.

The yards all seem to be doing a fair trade. Considerable complaints are made, however, of the difficulty experienced in making collections. This may, I think, be ascribed mainly to the fact that contracts taken in the early part of the season, are now jnst finishing up, and architects are careful to keep back enough to see the contract through. At the docks shipments a r slow indeed. It is questionable if there is much more of the dry stocks to come forward, and but little of this season's cut is as yet fit for shipment. Cherry lumber is extremely scarce here, and good lots of number one and two will bring as high as $50.00 per M., it must be good, however, in order to realize this figure. Good black ash will also sell readily.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
Scantling and joist, up to 16 ft	13 50
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 00
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	20 00
" " " 32 ft	21 00
" " " 34 ft	22 50@22 50
" " " 36 ft	24 00
" " " 38 ft	27 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	24 00
" boards "	20 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 00
Three uppers, Am. inspection	35 00@40 00

B. M.

½-inch flooring, dressed	30 00
¾ " " rough	16 00
¾ " " dressed	25 00
¾ " " undressed	15 00@15 00
" " dressed	22 00
" " undressed	16 00
Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ₱ M	2 90
Sawn Lath	2 75

WINNIPEG.

Pine lumber, 1st, common boards, dressed	$26 50
do, 2nd, dressed	25 50
do, 1st dressed rough	26 50
do, 2nd do.	25 50
Sheating, rough	25 00
Lumber 16 feet and under	24 00
do. over 16 feet, for each additional 2 feet.	1 00
Dimension and joists 16 feet and under	24 00
do. do, over 16 feet for each	1 00
Fencing	25 00
Sand 3 in. battens	30 00
1 stock boards, all widths	50 00
" do. do.	45 00
" do. do.	40 00
" do. do.	35 00
Flat clear, 1, 1¼, 1½, and 2 inch	60 00
Second do. do. do.	56 00
Window and door casings	50 00
Base boards, dressed	50 00
Flat pine flooring, siding and ceiling	40 00
Second do. do. do.	35 00
Third do. do. do.	30 00
Inch split siding, dressed	30 00
Spruce lumber—timber 16 feet and under	22 00
do. over 16 feet for each additional 2 feet	1 00
Dimension and joists, 16 feet and under	23 00
do do. over 16 feet, for each additional 2 feet	1 00
Shingles	22 00
Flat flooring, siding and ceiling	28 00
XXX shingles	5 25
Star A shingles	5 25
2 shingles	5 00
do.	4 50
Lath	4 50

MONTREAL.

From Our Own Correspondent.

JUNE 24.—There has been comparatively nothing doing in the lumber trade since our last report. There has been only a slight demand for building lumber, to make up for this to some extent the demand has been lively for stuff for building arches and grand stands for the St. Jean Baptiste celebration which begins here to-day, and continues all the week, and until this is over dealers don't expect to do much

As a large number of Americans are here the trade expect a goodly number of orders to be left for hardwood. Ash continues to be inquired for and there has been a fair quantity shipped to the United States. Our prices are unchanged, but there is a considerably firmer feeling in the market. We quote prices as follows ex yard :

Pine, 1st quality, ₱ M	$35 00@40 00
Pine, 2nd " ₱ M	22 00@24 00
Pine, shipping culls, ₱ M	14 00@16 00
Pine, 4th quality deals, ₱ M	11 00@12 00
Pine, mill culls, ₱ M	10 00@12 00
Spruce, ₱ M	10 00@13 00
Hemlock, ₱ M	9 00@10 00
Ash, run of log culls out, ₱ M	20 00@25 00
Bass, " " ₱ M	17 00@20 00
Oak, ₱ M	40 00@50 00
Walnut ₱ M	60 00 100 00
Cherry, ₱ M	60 00@80 00
Butternut, ₱ M	35 00@40 00
Birch, ₱ M	20 00@25 00
Hard Maple, ₱ M	25 00@30 00
Lath, ₱ M	1 75@ 0 00
Shingles, 1st, ₱ M	3 00@ 0 00
Shingles, 2nd, ₱ M	2 50@ 0 00

SHIPMENTS.

Shipping has been rather quiet for the last two weeks owing to the scarcity of tonnage. The ship Cambridge sailed for South America on the 19th, and several more vessels have been chartered for the River Platte at $13 to $14. Rates to English markets are steady at 40s. to 50s. At the moment there is enough tonnage offering for all demands. The following are the recorded shipments since our last report : SS Rokely for Sharpness, 26,234 deals and 1,668 ends ; SS Cremona for London, 7,654 deals and 381 ends ; BK Venus for London, 56,941 deals and 1,038 ends ; SS Cella for London, 41,749 deals and 4,003 ends ; SS Polynesian for Liverpool, 3,647 deals ; SS Oregon for Liverpool, 4,081 deals ; BK Oulie, The Downs, 8,915 deals and 2,020 ends ; SS Fenwood for London, 11,750 deals and 200 ends ; SS Lake Champlain, for Liverpool, 5,939 deals ; SS Concordia for Glasgow, 5,591 deals ; Ship Cambridge for Buenos Ayres, 56,986 pine boards 949,733 feet ; SS Montreal for Liverpool, 1,895 deals.

CORDWOOD.

There has been an improved demand during the past week for wood and it is expected to continue for some time as people are laying in their season's stock. Tenders are advertised for considerable quantities for the Court House and corporation, but the awards have not yet been made. Prices are steady and unchanged, with ample stocks. We quote ex cartage at the wharves as follows :—

Long Maple	$ 6 00
Long Birch	5 50
Long Beech	5 00
Tamarack	4 50

LIVERPOOL MARKETS.

Latest mail advices state that during the month of May there was a large consumption of spruce deals and pitch pine lumber, the present prices forcing them into consumption ; of the latter 607,000 feet were used. A private sale of spruce deals from St. John, N. B., per steamer, brought £6 7s. 6d. c i.f., while auction sales averaged about £6 15s. per std. Quebec waney board pine, 2nd class, 17⅞ inches was being placed at 22½d. to 23d. per foot.

QUEBEC.

The Quebec *Chronicle* of June 20th says :—The timber market is extremely quiet and weak, and we only hear of one Ottawa raft having been sold, viz : 56½ feet average with a small quantity of 19 inch waney board at 22 cents. A dram of good waney, 20 inch, at 33 cents, and some Ottawa ash and elm at 28 to 29 cents. In hardwoods we learn that some sales have been effected, but prices have not transpired.

DEALS.—Pine is very scarce and present prices high ; while for spruce, we learn that there is more inquiry at advanced rates.

CHICAGO.

The *Northwestern Lumberman* of June 10, says :—The wholesale centres at the East—Albany and Oswego—report a fair degree of activity. Lumber is going forward by Erie canal, since the settlement of the rate difficulty at Tonawanda, in large volume. A break in the Chaplain & Hudson canal temporarily stopped supplies from moving through that channel but the difficulty will soon be overcome by repars. The activity in Albany does not seem to be shared in New England and at New York and vicinity points. At Boston the distributive trade is reported dull. A steady movement at the East is going on all the time, but the handling of the bulk supplies is slow, and trade anything but rushing. At some interior towns in York state, building is brisk and consumption of lumber large. As a general rule, however, the distributive trade in the eastern states does not appear to be as active as in the Northwest, and even in this section a degree of summer moderation has settled down upon business.

AT THE DOCKS.

The market during the last three days of last week, and on Monday of this week, was well supplied with cargoes, but since then the offerings have been not so numerous, and somewhat meager in variety. The port list for the week shows 210 arrivals up to Wednesday night ; last week the number was 262. The winds have been coutrary since Monday, and to-day (Thursday) the market is nearly bare of offerings.

While our quotations of cargo prices are as nearly correct as possible, the bare figures do not indicate the true inwardness of sales. There is great diversity of opinion between buyers about individual cargoes, and some curious transactions take place in consequence.

Quotations are as follows :

Piece stuff, green	$ 9 00@ 9 25
Long timber, green	10 00@10 75
Boards and strips—No. 2 green	10 50@12 50
Boards and strips Medium, green	12 50@14 50
Boards No. 1, green	15 00@18 00
High grade	18 00@24 00
Shingles, standard	1 75@ 2 00
Shingles, extra	2 00@ 2 20
Shingles, clear	2 80
Shingles, cedar	1 50@ 2 00
Lath	1 50@ 1 65

AT THE YARDS.

The advance of rates from this city to Missouri river points has had some effect in diminishing shipments to Kansas and Nebraska. Yards that cultivated this trade more than any other, are feeling the effects of the higher rate in a falling off of business. Probably this will be but temporary, as supplies must go forward after a while to keep up assortments. Some of the larger yards are still shipping heavily. There are so many of these in the district that the aggregate daily shipments are large, long trains being constantly pulled out. The smaller dealers have a right to query as to whether the railroads are keeping good faith with them. It is barely possible that the heavier shippers are having a private rate given them that is not much, if any, more than the old 15-cent figure to Missouri river points.

While it is claimed that prices are tending to steadiness, it is acknowledged that there is some cutting of prices when they are made to country customers. Though there is much trouble in competing with northern, central Wisconsin, and middle river points in the Iowa and western trade, yet the most difficult competition to meet is right here among Chicago dealers. Little South Chicago, they say, is beginning to put in its oar to stir up the old district, and is issuing price lists that annoy somewhat like those that emanate from Michigan City. Trade is not rushing, and as usual, when shipments are only steady, the merchants are inclined to urge the demand a little. South Chicago has a trade to get, and does some advertising in the way of enticing price lists, no doubt. But after awhile that matter will right itself, and Chicago and South Chicago will journey along together arm-in-arm, as it were.

The local trade is flourishing more than ever. All the dealers speak of it in excellent condition, with a prospect that it will continue through the season, a promise that is justified by the daily issue of building permits ; and yet these do not indicate the full amount of lumber being used inside the county, as all the permits published are for structures within the city limits only, showing nothing of what is going on in the suburbs, which is really immense.

A noteworthy feature of this year's lumber trade is the large quantity of stock that is going directly from the vessel's rail into cars and canal boats. One house mentions this as a pecular feature of its spring's business, and much greater than in any previous year. The lumber is purchased and shipped mill run, culls out. The saving in expense is doubtless divided between the seller and the buyer, while the latter has the advantage of sorting up his stock to suit his trade. It is likely, too, that this kind of business has been stimulated by lower prices. Of course it pertains mostly to the territory this side of the Mississippi river.

It mentioned as an incident of trade that thick uppers are proportionately plentier than inch clears, and that prices have a relevancy to this difference in supply.

Inquiry in regard to cedar shingles reveals that one objection to them urged by the wholesale dealers is that generally they are not made of good timber, and are apt to be knotty. Good cedar shingles are made at Pentwater, Mich., that are handled with satisfaction at a number of yards. All agree that the demand for cedar shingles is increasing.

Travelling men and correspondents concur in the generally promising condition of the crops. On this basis all are expecting a heavy demand for lumber later in the season.

The stock on hand in the yards June 1, was 378,330,782, of compared to 280,216,785 on May 1, showing an increase of 80,113,097 for the month. On June 1, 1883, the stock on hand was 327,039,628, so that there was 50,301,154 ft. more lumber in the yards this year on June 1, than there was last year at the same date. But receipts this year by lake, which are mostly pine, were, up to June 1,309,651,000 as compared to 223,047,000 showing an increase this year over last of 86,604,000 feet. Though there may have been 50,000,000 feet more lumber in stock on June 1 than there was at the same date last year, the excess can be accounted for by the increase of receipts.

Receipts of lumber, shingles, etc., for the week ending June 19, as reported by the Lumberman's Exchange :—

RECEIPTS.

	Lumber.	*Shingles*
1884	61,578,000	30,662,000
1883	64,714,000	36,703,000

FROM JANUARY 1, 1884, TO JUNE 19, 1884, INCLUSIVE.

RECEIPTS.

	Lumber.	*Shingles.*
1884	551,140,000	302,149,000
1883	458,350,000	338,663,000
Increase	92,790,000	
Decrease		36,514,000

LAKE RECEIPTS FOR THE WEEK ENDING JUNE 16.

Lumber	54,540,000
Shingles	26,972,500
Lath	2,414,000
Posts	183,000
Railroad ties	52,111
Wood, cords	340
Bark, cords	118
Slabs, cords	1,850
Telegraph poles	17,220
Spars	

STOCK ON HAND JUNE 1.

	1884.	1883.	1882.
Lumber & timber	378,330,782	327,939,628	372,711,591
Shingles	273,316,625	152,787,642	167,508,300
Lath	34,736,110	40,435,868	21,907,726
Pickets	902,905	1,454,390	1,093,328
Cedar posts	263,873	311,853	238,832

ALBANY.

Quotations at the yards are as follows :—

Pine, clear, ₱ M	$53 00@58 00
Pine, fourths	53 00@58 00
Pine, selects	53 00@58 00
Pine, good box	22 00@33 00
Pine, 10-in. plank, each	00 42@00 46
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 21
Pine, 10-in. boards, 16 ft., ₱ M	28 00@32 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	16 00@18 00
Pine, 1-in. siding, select	43 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ₱ M	40 00@43 00
Ash, second quality, ₱ M	25 00@30 00
Cherry, good, ₱ M	60 00@85 00
Cherry, common, ₱ M	25 00@35 00
Oak, good, ₱ M	40 00@43 00
Oak, second quality, ₱ M	20 00@25 00
Basswood, ₱ M	25 00@30 00
Hickory, ₱ M	40 00@40 00
Maple, Canada, ₱ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ₱ M	38 00@40 00
Shingles, shaved, pine, ₱ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 4 75
" clear, "	0 00@ 3 25
" cedar, mixed	0 00@ 3 50
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ₱ M	0 00@ 2 75
Lath, spruce, "	0 00@ 3 00

BOSTON.

Cotton, Wool and Iron of June 21, says :—There is a good fair business doing in the supply of stock for dwelling houses in the city, suburbs and vicinity of which a good many are going up. Hemlock lumber fully holds its own.

Spruce is rather easy. Pine keeps along without any particular change. Yellow pine continues of light enquiry and rather in buyers' favor. Desirable grades of hardwoods are in very fair call, and prices of such are quite firm.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@25 00
Culls	12 00@14 00

OSWEGO, N. Y.

Three uppers	$44 00@45 00
Pickings	34 00@35 00
Fine, common	20 00@24 00
Common	13 00@16 00
Culls	10 00@13 00
Mill run lots	14 00@18 00
Sidings, selected, 1 inch	30 00@35 00
1¼ inch	30 00@36 00
Mill run, 1x10, 12 inch	17 00@19 00
selected	22 00@26 00
Shippers	13 00@16 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@12 00
1x6 selected for clapboards	22 00@35 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 00@ 3 50
XX pine shingles	2 30@ 2 50
Lath	2 00@ 2 25

TONAWANDA.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

LIVERPOOL.

We learn from the *Timber Trades Journal*, of the 14th of June, that with the termination of the holidays business had again been resumed, and from all appearances there was a steady demand going on, the wharves and railway depots being fairly employed in forwarding orders up the country.

The amount of business done, according to the recent statistics, is quite up the average, and this is no doubt traceable to the fact that with such low prices as are now current the temptation to lay in as great a quantity of stock as possible has had considerable influence with buyers who are in the position to hold more than is wanted for the moment; and further, the number of auction sales recently held in this city has no doubt also stimulated consumption, offering as they do such inducements to consumers or small dealers to supply their wants at first hand.

Spruce deals and pitch pine, both of considerable importance to the builder, are at present exceedingly low in price, especially the latter, and, as we said last week, the bottom of the market for this article appears to have been touched; at any rate, there does not seem any probability of a lower depth being reached.

The first arrivals of Quebec yellow pine deals are now coming to hand by the various steamers running direct between this port and the River St. Lawrence. Some very good parcels have been landed, and have nearly all passed into consumption. Prices are very moderate, but as the goods are imported direct by the merchants, sales have been made on terms that have not transpired.

GLASGOW.

The latest issue of the *Timber Trades Journal* to hand (that of June 14th) gives the following information regarding the lumber trade in Glasgow:—

The timber market here during the past week has been quiet, no public sales having been called by brokers, and the interval of quietness is no doubt needed, as auctions have been pretty frequent of late. Last month there were four held, at which about 3,000 logs and over 14,000 deals changed hands.

The spring fleet of steam traders have been arriving in close succession, bringing quantities of Quebec deals, about 90,000 pieces having been imported within the last few weeks, and we observe that by far the greater part landing are of the common sorts, pine and spruce. Of 3rd and 4th qualities this market is always a large consumer, but at present it stands more in need of 1st quality yellow of good breadths which would realize well to the importer who should send. There should be no lack—if they are really to be had on the other side—as steamers make short trips, and there is more than one line of traders from the Clyde.

The usual quarterly statement of stock in Clyde ports will be submitted in a few weeks, and will show the supply on hand of the various descriptions of wood goods.

As there is a well known shrinkage in some departments of trade this year, especially in shipbuilding, a very moderate import both of square timber and deals should suffice. Of pitch pine there has been imported this year 23,000 logs sawn and 1,900 logs hewn, and the carrying tonnage amounts to 19,000 tons. This is in excess of the corresponding period of last year, but taking an average of four years from 1880 it is less by about 4,000 tons. The stock at present appears to be ample. From British North America there had been imported up to the end of last month about 6,000 logs pine and hardwoods and 66,000 deals. The arrivals this month from Quebec, already referred to, have added largely to this total of deals. Last year's import to end of May was 1,304 logs and 237,000 deals, the falling off this year being on St. John spruce deals, of which considerable remainders from previous imports have been on hand.

An important sale of mahogany, walnut, birch, and deals is announced to take place here on 17th inst.

LONDON.

The *Timber Trades Journal* of Saturday, June 14th, says:—Turning to the public sales, the prices of Tuesday, June 10th, were far from affording any satisfactory indication of the market improving; on most of the lots sold the values were extremely low, and some of the lower qualities, from good Swedish ports, realized prices that would barely leave £3 a standard for the f.o.b. cost.

There was almost every variety of building wood submitted, and those who supply small builders had no doubt a good time of it. Much of the cheap common quality staff, fetching little more than firewood prices, will find its way into consumption with a profit (which it can well afford) proportionate to the risk attaching to credit accounts. Every one nowadays disclaims having anything to do with little builders, but they must get their goods from somebody, otherwise with hardly any capital how could they possibly go on?

It is, of course, a recognized thing at the present time that the trade of the country generally is very slack, and while this state of things continues it is almost hopeless looking for any favorable change in values of wood, let the state of the stocks be what it may. In addition to this, there is a want of confidence prevading the market, and great hesitation is displayed by those holding large stocks in passing them in big lines, except for cash or very short bills. This of itself delays business, and helps to drive an immense amount of stuff into the public sales for immediate realization that would otherwise go into consumption in the ordinary way, sellers preferring to take their chance of the market in this manner rather than incur any risk themselves, even with the assurance of securing far better prices.

Thursday's sale (June 10) was a very brief affair, the most noticeable feature being the sale of the fresh birch timber ex Thos. N. Hart, from St. John, comprising some 23 lots in the catalogue. Of these some dozen lots under 16 in. were secured by one buyer at 55s., which we consider was very cheap. The prices for the 16 in. and under 18 inch were 62s. 6d. to 65s., and the two lots of 18 in. and up went at 75s. These goods were a very nice parcel, and the moderate prices obtained are due to the large stocks of this class of timber now in hand. The stave sale which followed later in the day, was but indifferently attended, and prices, in view of the limited character of the demand, call for no comment.

TYNE.

We take from the *Timber Trades Journal* a report of the lumber trade at this port. In its issue of June 14, it says:—The principal item calling for any special comment during the last seven days has been the arrival of a large number of stave vessels, no less than 14 ships with staves have come forward. These goods are reported to be selling at fearfully low rates, in consequence of the depression in the chemical trade; it appears, at any rate, there will be no scarcity for some time to come. In other goods there are several cargoes from the Baltic with sawn goods, some cargoes of pit-props, and three Gothenburg and Norway steamers with the usual assorted cargoes. In consequence of these arrivals the river and docks present an unusually animated appearance, and all hands are busily engaged. Most of the deliveries have hitherto gone to Tyne Dock, but Howden Dock, the property of the Tyne Commissioners, is becoming a more important factor, and during the last two years there has been increase of the quantity of wood goods delivered to this place.

Trade remains still unusually quiet for the season, and shows but little signs of improvement. In shipbuilding little or no demand is felt, while the various ironworks and collieries buy only from hand to mouth.

BOARD OF TRADE RETURNS.

The following are the returns issued by the Board of Trade, for the month of May 1884, and first five months of the year:

MONTH ENDED 31ST MAY, 1884.

	Quantity.	Value.
Timber (Hewn).	*Loads.*	*£.*
Russia	22,124	43,735
Sweden and Norway	38,725	56,106
Germany	31,013	71,886
United States	23,608	78,308
British India	443	6,925
British North America	3,774	12,873
Other Countries	29,742	83,281
Total	149,429	353,114
Timber (Sawn or Split, Planed or Dressed).		
Russia	63,190	128,790
Sweden and Norway	136,960	306,508
British North America	24,999	61,239
Other Countries	62,918	193,785
Total	287,696	690,272
Staves, (all sizes)	7,164	27,625
Mahogany (tons)	7,016	65,723
Total of Hewn and Sawn	437,125	1,043,380

FIVE MONTHS ENDED 31ST MAY, 1884.

Timber (Hewn).		
Russia	31,604	70,980
Sweden and Norway	243,012	356,213
Germany	121,240	301,825
United States	58,342	217,934
British India	22,277	329,332
British North America	12,182	49,112
Other Countries	118,018	261,635
Total	676,591	1,587,081
Timber (Sawn or Split, Planed or Dressed).		
Russia	87,574	173,495
Sweden and Norway	372,345	844,442
British North America	58,445	137,535
Other Countries	168,472	522,971
Total	686,836	1,678,443
Staves (all sizes)	35,407	157,240
Mahogany (tons)	32,595	297,639
Total of Hewn and Sawn	1,364,427	3,265,525

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This book should be read by the young for instruction, and the afflicted for relief. It will benefit all. —*London Lancet.*

There is no member of society to whom this book will not be useful, whether youth, parent, guardian, instructor or clergyman.—*Argonaut.*

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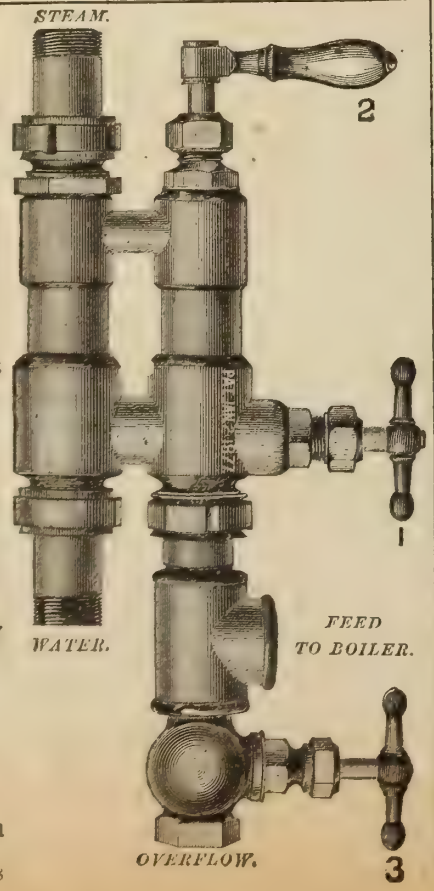
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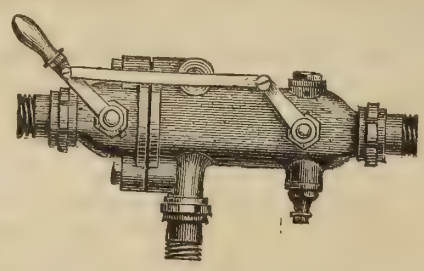
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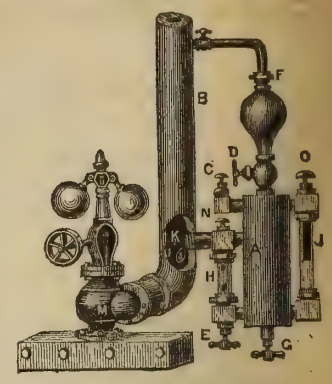
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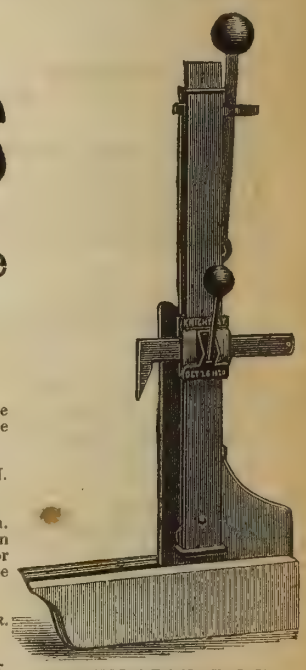
Yours Respectfully,
PETER McLAREN.

BERKLEY, April 20th, 1883.

HUGH GIBSON,—SIR,—The Dogs I bought of you give satisfaction. They beat any Dog that I ever saw for ripping or edging lumber on carriages. They are just the thing for scantling. I would not take $50 for them to-day and have to wait for another pair to come from you, because I believe they make two dollars a day for me.

Yours truly,
GEO. S. BROWN, JR.

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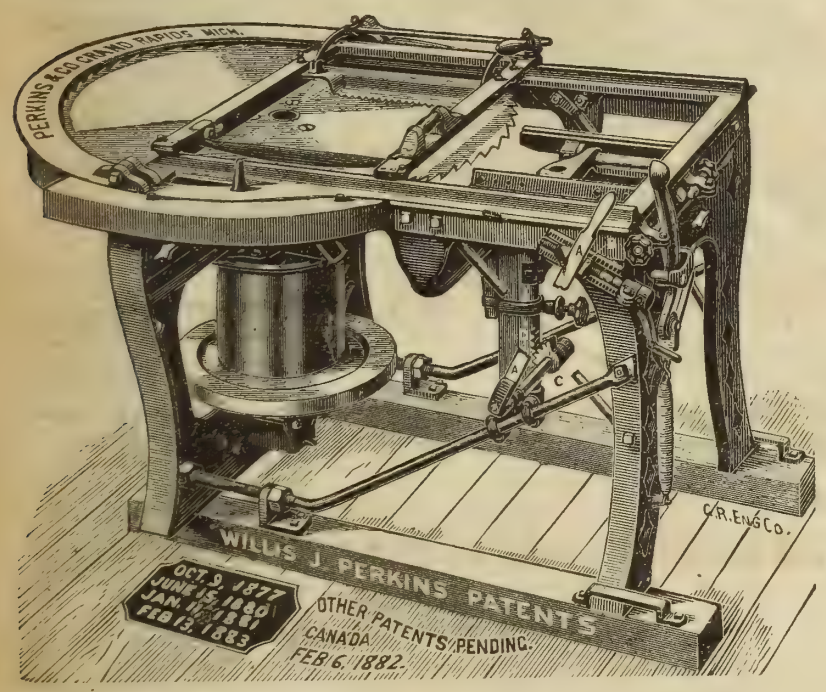
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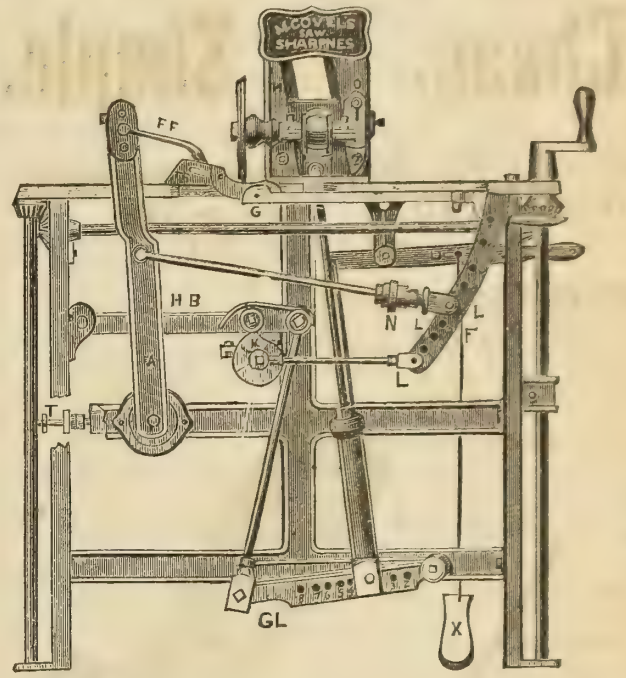
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The only Horizontal Saw Machine on which a thick slab can be cut from the bolt.

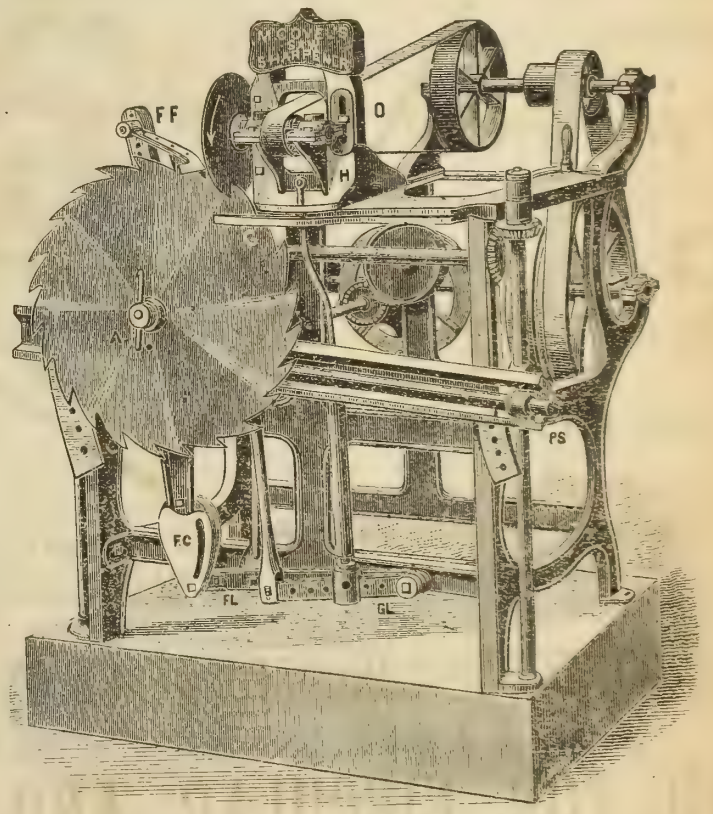
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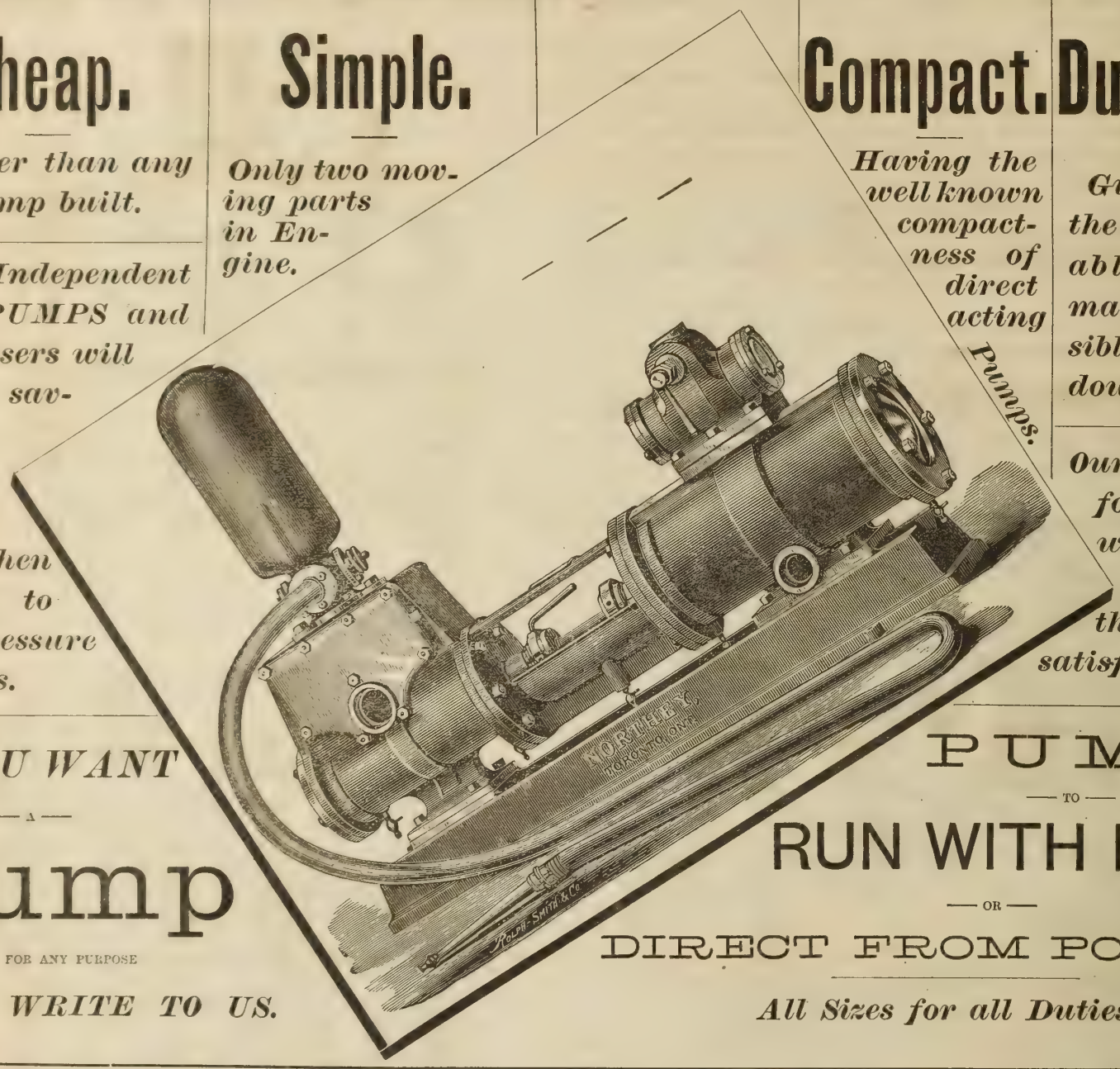
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DEAR SIR,—I am happy to inform you that the Appliances I got from your Chicago agent have had a most marvellous effect upon my patient who suffered from Sciatica. He could get very little relief from medicine. Shortly after he got your belts he was able to get out of bed, and is now on a visit to his Canadian friends. Send me some more circulars. Yours truly, DR. D. McLACHLAN.

MR. NORMAN, PERTH, ONT., June, 1883.
DEAR SIR,—I have been wearing your Electric Insoles for about six months, and have been greatly benefited by them. I recommend them to all who suffer from Rheumatism. Yours truly, MRS. J. GUTHRIE.

A. NORMAN, ESQ., OTTAWA, September 3rd, 1883.
DEAR SIR,—I have experienced considerable benefit from your Appliances. I feel stronger and better every way. Yours truly, R. E. HALLIBURTON.

A. NORMAN, ESQ., PETERBOROUGH, October 15th, 1884.
DEAR SIR,—Soon after I commenced to use your Electric Appliances they opened my bowels, cured my cough and cold, relieved my head, and considerably relieved my catarrh in consequence. The discharges from my head and chest are now easy, and I feel altogether better. My digestion has improved, my stomach is less sour and windy, and I am less troubled with lascivious and vivid dreams. I had previously tried almost all the advertised patent medicines without deriving any good. Yours truly, J. GREEN.

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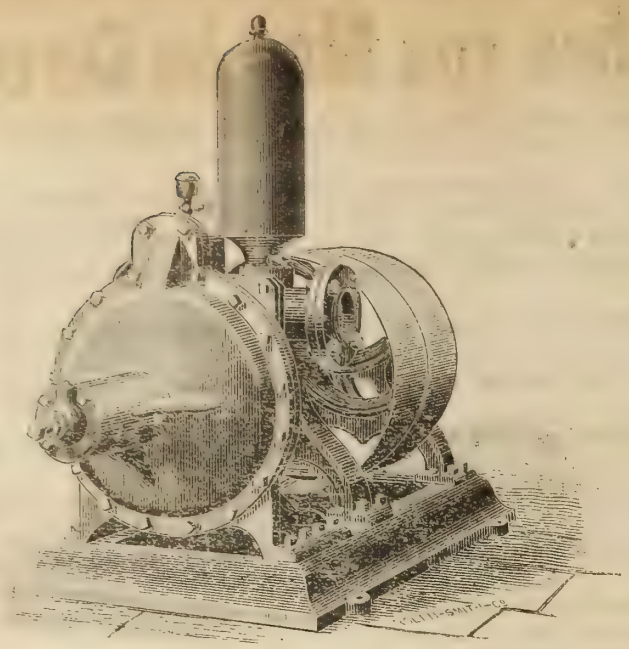
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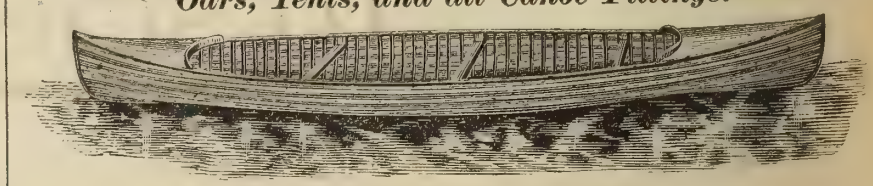
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VOL. 4. PETERBOROUGH, ONT., JULY 15, 1884. NO. 14.

INTERNATIONAL FORESTRY EXHIBITION, EDINBURGH.

The date for the opening of this exhibition (July 1st), to which we have on several previous occasions called the attention of our readers, is now rapidly approaching, and we are very pleased to announce that there is every prospect of its being a most interesting and representative "show." From all parts of the world the committee continue to receive applications for space, and so great has been the demand that it has been decided to erect additional buildings. Norway, Sweden, Russia, Canada, and all the great timber-producing countries will send specimens of their forest treasurers, and as to the private exhibitors, who number over 500, the variety of their exhibits, to judge from a preliminary list of exhibitors which we have seen, is astounding, and the only wonder is that the idea of a "Forestry" exhibition should have been allowed to lie dormant so long.

To the timber trade this exhibition cannot fail to be a special attraction, and the great variety of hardwoods and furniture which will be exhibited will in all probability lead to the introduction, for commercial purposes, of many woods which, althongh well adapted for use in different branches of trade are yet unknown in this country. The forest resources of Japan Siam, for example, have, with the exception of some few cargoes of teak from Bangkok, not yet found their way to any extent into this market, and yet, we understand, the exhibits from these countries will include specimens of several woods which are in every way fitted to take their place alongide mahogany, black walnut, and other favorite cabinet woods.

The machinery for the working and conversion of wood should also prove a very attractive feature in this exhibition, and the names of Messrs. McDowall & Co., of Johnston, N. B., and other eminent makers seem to guarantee a goodly show in this class. It would be very interesting if some foreign nation were to show us the machines in use for the various converting operations in their respective countries; the tools used in the manufacture of those wonderful and intricate wood carvings from the East, which are so much admired, would, for example, prove very interesting.

A glance at the list of exhibits shows us such a rich treat that, if we once begin to tell our readers what they will find here, we shall hardly know where to stop, besides in some measure anticipating the pleasure which they will derive from a visit to Edinburgh next month; so we must content ourselves with a brief reference to what strikes us as a particularly interesting feature, and that is a contribution from Manitoba and the Canadian North-West, which has just been shipped from Montreal by the steamer Waldensian for Glasgow. This exhibit, which is made by the Canadian Pacific Railway Company, through their representative in London, Mr. Alexander Begg, will consist of a homestead farm as it exists in the Canadian North-West. On space reserved for the purpose in the ground of the exhibition will be erected a portable house, such as are in general use in the Canadian North-West, amply supplied with furniture, houshold and general farming utensils as used by settlers. and manufactured from Canadian woods, the current price of each article being marked as a guide to intending emigrants. A roof stable, roofed with slabs, a driving shed, and all the accompaniments of a homestead farm, will be included; among these are the agricultural implements in general use in the North-West, of which wood is a principal component part; wagons, sleighs, and one of those remarkable and almost extinct means of conveyance, a Red River cart, capable of carrying as much as twelve hundred pounds for hundreds of miles, though in its manufacture not a particle of iron is used. A pump made from native wood will also be shown. Perhaps, however, the most interesting part of the exhibit will be a collection of the native woods of the North-West, comprising some thirty-seven varieties, in addition to a complete assortment of Rocky Mountian timber, and numerous other articles. The exhibit will be arranged as though the farm were in actual use, and, seeing the importance attaching to the emigration movement, it will no doubt prove a notable attraction of the exhibition.

We are pleased to observe that the executive, wisely following the plan so successfully adopted by the management of the South Kensington Exhibition, have taken every means to make the exhibition thoroughly popular and attractive, and the question of evening illumination of the grounds and other attractions have engaged their attention, and with these and electric lighting, which will be displayed in the grounds as well as in the building, the exhibition is sure to be a favorite resort for the visitors and tourists from all parts of the world as they pass though Edinburgh during the summer season. The committee have also arranged with Mr. Pain, the well-known pyrotechnist, for an illumination of the exhibition grounds on the evening of Tuesday, 8th July, and this, it is expected, will be the first of a series of illumination.—*Timber Trades Journal.*

NEW LUMBER RAILROAD.

The Williamsport (Pa.) *Gazette*, of a late date, had the following concerning a new railroad outlet for mills in the vicinity of Lock Haven: "Last week engineers surveyed a route from Kistler's tannery, Lock Haven, to connect with the Beech Creek road either at Mill Hall or about Flemington. The leading spirit in the movement is W. W. Morrison. A new company is being organized, of which Samuel Crist will be president. The object of this company will be to reach with the branch roads the saw mills tanneries and other manufactories south of the Pennsylvania & Erie road. If built, it will be by Lock Haven capital and controlled by Lock Haven people. As it is not unlikely that proper traffic arrangements can be made with the Beech Creek, the Pine Creek and Reading railroad companies, this little road ought to pay the subscribers handsomely, and it ought in a few years to double the business of Lock Hvaen. The survey for the road is being made by Mr. Jackman, nephew of Mr. Morrison."

COLONIAL SAW MILLS.

In Edward Eggleston's able article, Commerce in the Colonies, published in the June *Century*, he has the following about early saw mills: "In all of the colonies there was a trade more or less considerable in timber, which was the quickest and easiest return to be had by a ship bearing emigrants and supplies. But human hands are few in a new country, and the process of getting out boards and joists, by one man in a pit and another above to pull and push the saw, was tedious, and its expensiveness often counterbalanced the cheapness of the raw material. Two men could saw but about 100 feet in a day after the timber had been squared for them, and a single plank sometimes sold for more than a day's wages. Rude planks were sometimes made by splitting them out, and the first houses were often inclosed with these set upright like palisades against a frame, or with large shingles called "clapboards," rived with a froe. The abundance of timber and the scarcity of timber early suggested the profit there would be in erecting saw mills. One was sent to Virginia in 1620, long before England had such machines; but the mill and the men who ran it probably perished together in Opechancanough's massacre in 1622. Another was built in Virginia in 1652, at a cost of 48 beaver skins. The Dutch built many mills along the Hudson to run by wind or water, and at an early day great quantities of boards were exported. By 1701 there were 40 saw mills in New York, one of them running 12 saws. Planks were often sawn 18 feet long and three feet wide without showing a knot. The New Hampshire settlements were at first almost entirely composed of timber cutters, and here there was a saw mill as early as 1635. About this time Massachusetts also set up one of these devices, which were new to Englishmen, but 1,200 years old in Germany. Lumbermen also thronged the harbors of Maine, and at a later period New England abounded in cheap saw mills built upon small brooks. An important branch of the trade on the northern coast was the supplying of the royal navy with yards and bowsprits. White pine trees over two feet in diameter were reserved for the navy, to be used for masts, which were at that time made of one piece. Nothing more exciting was ever seen in the lumber woods than the dragging to the water side of one of these great pines, which might reach 120 feet in length. It was drawn over the snow by 70 or 80 yoke of oxen; and since it was difficult to start so many beasts at once, the immense train was never allowed to stop, however long and hard the road. If an ox became exhausted, he was cut out of the yoke, without a moment's pause. Ships of peculiar construction, and about 400 tons burthen, were employed to carry these masts, and were able to take about 50 at a time, with yards and bowsprits."

A New Field to Conquer.

N. Slaght & C., of Greenville, Mich., who have 13,000 acres of fine timber land on the headwaters of Pine river, in Lake County, have concluded to begin operations this season, with a view a getting the product on the market early next spring, and have accordingly contracted with Wm. F. Stuart, of Sand Lake, to remove his shingle mill from that place to a point eight miles west of Tustin, which work has already been begun. Mr. Stuart will also erect another shingle mill in the fall, and two more in the spring, each mill to have a capacity of 45,000 per day. A saw mill will be in operation by winter, and will have a daily capacity of 40,000 feet. The firm estimate that the tract contains 150,000,000 of shingle timber, three-fourths of which will run to stars. The hemlock and hardwood timber bordering the stream is estimated at 50,000,000 feet. The product of both mills will be piled until spring, when the firm propose to put in an eight mile spur track, narrow gauge, striking the Grand Rapids & Indiana railroad about midway between Tustin and Hobart. It will take from five to eight years to cut all the timber on the tract.—*Northwestern Lumberman.*

THE oak tanbark industry of the mountain region of Tennessee is becoming important. Fully 1,500 men are employed in the occupation of getting bark along the Cumberland & Ohio railroad. A man who could not sell his land at $3 an acre, has bark enough off it to amount to $50 an acre. The season for cutting the bark begins in April and lasts five weeks.

Ludington *Appeal*: The Ludington Shingle Company's mill, employing 35 men and boys, has shut down indefinitely, owing to the low prices that shingles are bringing. The Lyon shingle mill is only running to half its capacity, and when Butters & Peters start up it will be to run only one side. There is talk of all or nearly all the shingle mills on the shore shutting down, but it is likely to end in talk, nothing more.

MANUFACTURING IN EUROPE.

Of all European nations only three, England, France, and Germany, claim to have a textile industry. Manchester, Bradford, Glasgow, Lyons, Elboeuf, Crefeld, Chemnitz, and many more are well-known centres of European textile industry, and the manufactuers of these towns can be found in almost every part of the world. The lion's share of this trade is, however, taken by England, whose cotton industry, with its 42,000,000 spindles (that is more spindles than the rest of the world put together), has reached a stadium of development that the inventors of the spinning-frame and power-loom would have hardly dreamed of one hundred years ago. In order to protect themselves against the too great productivity of England, the European States have nearly all placed high import duties on foreign goods so as to secure the home market to their own manufacturers. Lyons is still the centre of the silk industry, but the Swiss and German silk trade keenly compete for the trade of Lyons. The country which shows the relative increase in textile industry during the last ten years is Germany, and that country is now aspiring for a good share of the world's textile trade, as is proved by the efforts made to establish in several cities permanent exhibitions of samples for export. But, notwithstanding all the efforts of the French and Germans, England has so far retained her industrial supremacy, and her industries show no sign of decay. Will the efforts of Continental Europe be at last crowned by success, and will the Continent succeed in obtaining the principal share of the world's textile commerce? Time will show. But as civilization travels westward so does commerce also, and the position and resources of the United States, and its progressing industrial capacity, permit us to expect that in the fight for the world's commerce the industrial powers of Europe will not have to fight alone, but will have to count as a competitor the great American Republic, whose incalculable resources will be a heavy odd in favor of the younger continent.—*New York Dry Goods Bulletin.*

ANTWERP INTERNATIONAL EXHIBITION.

We have received the prospectus of the great international exhibition to be held at Antwerp in the year 1885, commencing on the 2nd of May, and lasting for five months. This exhibition which, while the inception of the project was due to private enterprise, is supported by the Government of Belgium and the city of Antwerp, being under the patronage of the King of the Belgians, is intended, as a matter of course, to further international exchange and to offer to all the nations an opportunity to exhibit their various products to the people of the Low Countries more particularly, and its originators believe that, from the commercial position of this city, a vast number of visitors will attend it.

The exhibition proper will be divided into five sections, education and the several arts, navigation, commerce, fisheries and pisiculture, electricity and agriculture, forestry and horticulture. It will likewise conclude with an exhibition of painting, sculpture, architecture and engraving, with a convocation of the artists of all nations. The grounds secured comprise an area of 54½ acres, and a dock for the accommodation of the marine section, and the buildings, which will be very large, are being constructed upon the most approved principles.

The first section, that of education, will comprise schemes of organization and appliances for instruction, maps, books, photographic apparatus, musical instruments, mathematical instruments, &c. Distinct classes in this section will be devoted to furniture of all kinds, including cutlery, bronzes, clocks, leather work and heating apparatus, and to textile fabrics of all kinds, including, strange to say, along with all manner of woven goods, portable weapons, hunting and shooting, travelling and camp equipage and toys.

The second section, that of industry, includes many varied clauses, among which are the product of the mine and all appliances used therein; products of the forest, and of hunting and fishing, agricultural products not used as food, chemical and pharmaceutical products, processes for bleaching drying, printing and dressing leather and skins; machinery in general and all apparatus used in cultivation and working of forests, in agriculture, chemistry, tanning, spinning and rope making, weaving and making of cloaks, furniture, paper, carriages, railway appliances, telegraphic apparatus and military appliances and apparatus. Under this section will also be placed in a separate group, all alimentary products of every possible kind.

The third section, navigation, will comprise vessels of all kinds, and apparatus for the saving of life, &c. Fishing vessels and all the varied apparatus used in fishing and fish culture, including statistics, &c., will be placed in a separate group, and a separate group of this class will be composed of statistics, commercial museums and exports to foreign nations.

The fourth section, electricity, will comprise all relating to the generation or use of the electric fluid, such as steam plant, electric piles, chemical batteries, cables, instruments of all kinds, and the appliances of electricity of every form practically illustrated.

The fifth section, agriculture, includes special classes of cattle, dogs, horses and asses, and flowers and small fruits, as well as regular classes for all domestic animals, fruits, seeds, trees and plants.

All foreign governments are requested to appoint commissioners to whom all applications for space may be sent, and who will have the discharging of all questions relating to flower space, but in the event of commissioners not being appointed, would-be foreign exhibitors can correspond with the executive committee at Antwerp directly.—*Montreal Witness.*

STEAMERS FOR TIMBER CARRYING.

Steamers are an innovation in the wood trade, and are taking up the office of wood-built ships without being constructed for the purpose of carrying timber. It would not be wise to say they are so unsuitable that they will have to retire from this class of carrying, for they are ruuning the old ships off the water one by one, and one who runs and reads can see they are the ships of the future. It is thus clear that we must admit their presence in the wood trade, and it is equally clear that some change must be effected in their construction to enable them to safely take in and discharge cargoes of timber.

The first entry of steamers in the trade was in connection with carrying deals, and for this they cannot even be termed suitable, as all the cargoes have to be hauled on to the deck, and lowered into the hatchways. In discharging, the deals are hung in chain or rope slings, and hauled high into the rigging, and lowered over the sides. This is, of course, done by steam, otherwise the working of wood as stowage for such vessels would be madness. The damage to goods from being handled in these slings is so great that we have seen charter-parties framed in which the use of chain slings was prohibited. We have also seen such prohibitions disregarded, and claims made for damages to goods by the chains breaking off the edges. It is being found in practice that chain slings are unsafe, for they are more liable to slip than slings of rope.

This question of handling goods in connection with steamers is one very patent to shipowners, as in case of accident or death to any of the hands employed the penalties under the Employers' Liability Act are very serious. The effect of this may be seen in the sparing of chain slings, and the invariable introduction of new ropes to the loading and discharging of every cargo.

The difference between wood vessels and iron vessels, in regard to their suitability or unsuitability, lies in the fact that steamers have no bow ports through which the goods can be discharged after the holds are broken into. They are built on lines of speed, and the angles of the cutwaters are so acute that, independent of the policy or risk of constructing these costly vessels with portable bow-plates, they in a large measure are impracticable.

We must not overlook the fact that steam vessels trading to the Baltic are invariably built with a series of small portholes at their sides immediately under the level of the decks. These are most useful in discharging sawn deals and boards on to quay or lighter, but they are no use for hewn or sawn timber.

It is to the point of hewn or sawn timber that we more especially direct our attention. The unsuitability of steamers for carrying these goods is noticeable under several headings. The first is that the holds are divided into "fore" and "aft" by the engine and boiler being placed amidships. Again the fore hold is invariable divided into two, the "forehold," or the "forcastlehold," and the "main hold." The effects of these divisions, even in large and long ships, are such that they render one or more of the holds too short for practically stowing timber of such long specification as we are in the habit of receiving from the pitch pine ports of the Southern states of America.

We write with a case before us of a large vessel which has brought a cargo of sawn timber from Pensacola. Her forehold was too short and too inconvenient to stow timber, and it had to be entirely filled with deals. Her aft hold was too short for the regular run of the cargo, and the shorter lengths had to be picked out to suit it. The main hold was reserved for the long lengths, and consequently the stowage was bad; deals were used when possible, but a lot of dead space was unavoidable. Here the whole of the timber had to be hauled over the bulwarks and the deck and lowered endwise through the hatchway into the hold. The stowage of the wings, which comprised nearly two-thirds of the hold, was interfered with by iron colums or pillars, which supported the deck cut into by the hatchway. The stowage of the lower part was interfered with by a beam which crossed the vessel in a line with one end of the hatchway.

The loading and discharging of this, the best hold in the vessel, was one long struggle with difficulties, and the dangers connected with it were such as to make one wonder where men could be found to risk their lives for their daily bread in such a calling.

The process is to work the logs free in the hold, to clip them with hooks about one-sixth from the end, and in this state to hoist them into the rigging until the lower ends are clear of the deck. This being done the ends are carried over the bulwarks, and the balks are lowered across the deck, the hooks are then moved to the ends of the logs, and they are tilted up until they shoot like darts into the dock, making long dives into the water, and coming to the surface at some distance from the ship.

You cannot look on this work without coming to the conclusion that it is both costly and dangerous, and endorsing the remark of an expert of fifty years' experience amongst balk timber, which was "something different to this will have to be done if steamers are to carry balk timber; the steamers will have to be built for the purpose."—*Timber Trades Journal.*

SAW MILL WASTE.

A correspondent of *The Industrial Journal*, Bangor, Me., writes from Waterville: "The Lockwood Company, proprietors of the cotton mills at Waterville, are on the track of the saw mill owners located on the river at Fairfield and Skowegan, seeking to restrain them from depositing their debris in the river.

In the spring of 1876, soon after the first cotton mill at Waterville started up, the slabs, edgings, shingle waste and other debris from the lumber mills above came down upon them in such quantities as to obstruct the flow of water through the raceway and canal, and also gathered on the rocks to such an extent that it was impossible to rake it off, fast enough to let sufficient water through to run the wheels. The following winter the legislature was asked to pass a law prohibiting the throwing of such refuse into the Kennebec and its tributaries. The law was not passed that year, but was passed by the legislature of 1878. Some little attention was paid to it, but it was not until three years ago, when the pulp mill at Fairfield was built, that much of the waste was kept out of the river, and then only the slabs and board edgings, which were valuable for wood and to grind into pulp.

Meantime the Lockwood Company continued to experience great damage and expense, and tried often to secure the desired end by friendly negotiations. One year ago the treasurer met the Fairfield mill owners, and they promised that the nuisance should cease at once. This year the trouble came in a still more aggravated form than ever before, causing the mills to shut down for several days, thus occassioning great loss in production, and expense to the company as well as loss of wages to the help. An application was then made for an injunction, and and Judge Peters came here to hear the parties on both sides. Hon. E. F. Webb appeared for the Lockwood Company, and S. S. Brown, Esq., and Col. J. W. Spaulding for the saw mill owners. Acting upon the advice of the judge, it was agreed between the parties, since the May term of the law court is so near at hand, to the evidence before a commissioner and have it reported to the full court at Augusta, when the chief justice will grant a temporary injunction, provided the facts in the case warrant it, pending the consideration of the question of a permanent injunction by the full court. R. B. Dunn, Esq., president of the Lockwood Company, and J. W. Danielson, treasurer, have already given their depositions, from which it appears that the damage has been from $40,000 to $50,000 to the company, besides a like sum to the help. The company employs 1,100 hands, and the monthly pay role is $25,000. The result of this case will be watched with deep interest, for it is reasonably sure that no more cotton mills will be built in Waterville if this nuisance is to continue."

SHADE TREES ON THE FARM.

A few well-formed trees along the fence rows, and even scattered here and there in the open fields, add greatly to the appearance and value of a farm. Cattle, sheep, and other farm animals, suffer greatly from the hot sun when confined in a shadeless pasture in midsummer. They will seek the slight protection from the boiling sun a fence may afford, or stand huddled together for hours, with their heads shaded by each other, in a most unhealthful manner. Animals thus exposed do not give the best returns to the owners, and for this reason, if not for comfort's sake, they should be provided with shade. Some farmers object to trees in the pasture, because their shade is too inviting, and keeps the live stock from feeding. Farm animals need not graze all the time, and with good pasturage, can get all the grass they need in the cool portions of the day, between which they should have refreshing shade for chewing the cud of contentment. Men are not the only creatures that may be sun-struck; cows unduly exposed to heat, frequently become sick, quickly fall off in milk, and may require weeks of expensive nursing to bring them back to good health. Trees are an obstruction to the cultivation of a field, and occupy the soil for several feet around them, to the exclusion of grain and other crops, and therefore it is best to plant most of the trees along the line of boundary fences. The tired laborer is thankful for a few minutes of shade and rest, and doubtless will do more work by taking an occasional "breathing spell" under a tree. A tree in midfield may be a chestnut or hickory, and make good returns for the space it occupies in nuts, as well as refreshing shade. In many fields there is a low place with a spring or small running stream and is well fitted for a small group of trees. In short any part of a field not suited for cultivation, may profitably grow a few trees, thus affording a retreat for the live-stock from the midday sun and driving storms. If the pasture has no shade trees, it will pay to provide a temporary shelter. Four strong posts with forks at the top, may support two poles; across these lay smaller poles for rafters. The top may be covered with straw, swale hay, or, if more convenient, brush may be cut and laid upon the skeleton roof.—*American Agriculturist.*

THE furniture interest in the United States is enormous. Three years ago it amounted in New York to 300 factories and a product of nearly $10,000,000. Cincinnati had 119 factories with a product of $4,500,000. Chicago turned out above $6,000,000; Philadelphia, $5,000,000, and Boston, $4,000,000.

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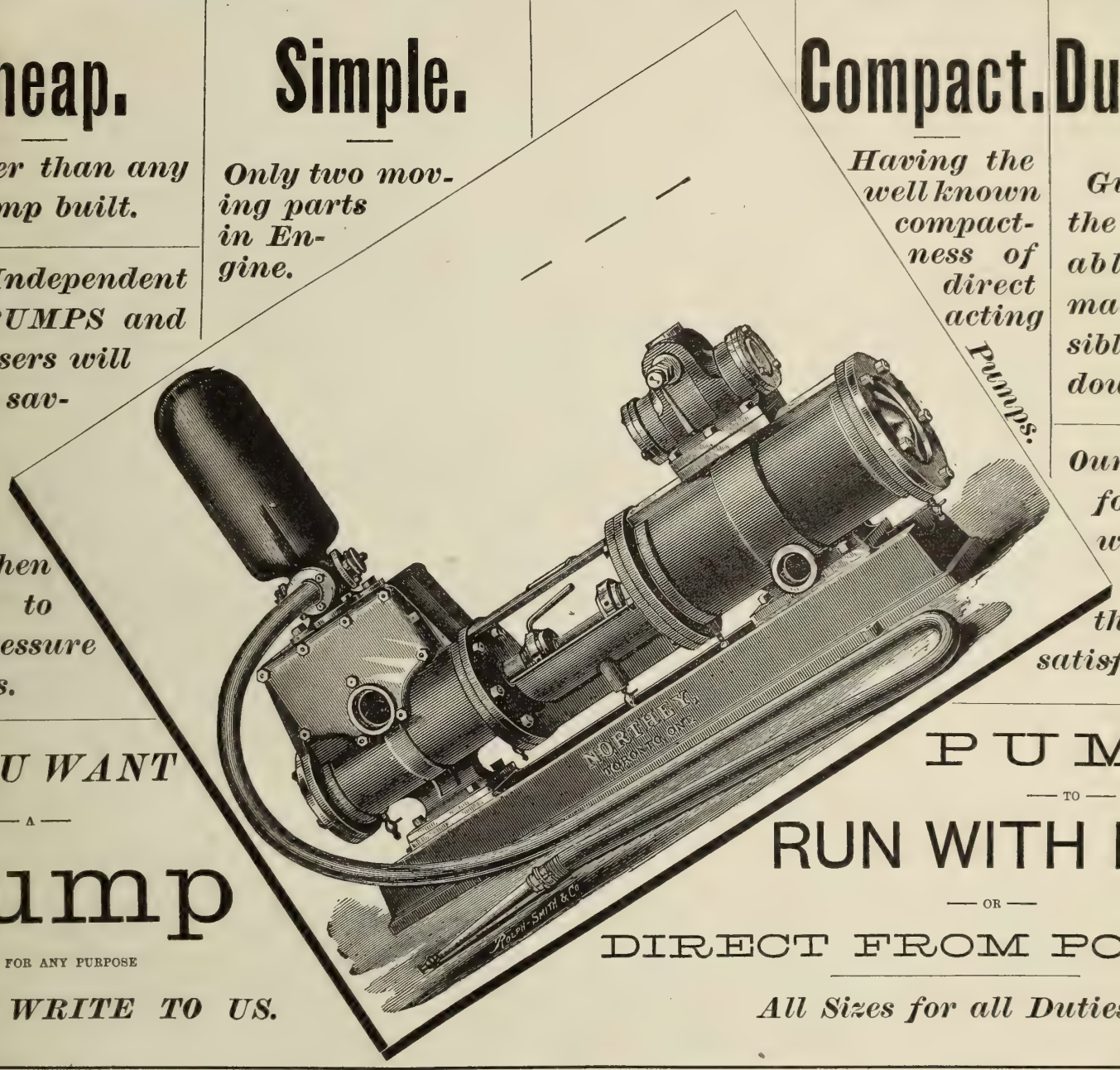
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SOUTHERN HARDWOODS.

An Indiana firm that has been in the hardwood lumber business for twenty years, writes: "As for us, we are firm believers in the future of hardwood." It would be difficult to find men of broad discerning powers, men who can consider the past and judge of the future, who would render a different opinion. The man who has not the strongest faith in the future of hardwood, does not understand to what extent the hardwood lumber has been cut by lumber dealers as the "hardwood states"—Michigan, Indiana and Ohio; neither does he understand the present enormous demand for hardwood lumber, or what it will be hereafter. In the life of a nation it has been but a moment almost, since the states named above were settled. Within the memory of young men hardwood timber in these states has been logged into heaps and burned. Thousands of trees thus destroyed might have been left standing at no detriment to the farms which were being cleared, but the foresight of the settlers did not discover that there would ever be a demand for them.

The great bodies of hardwood timber are now in the south. Michigan, Indiana and Ohio cannot properly be called hardwood states any longer, because the heaviest operators in hardwood lumber now look elsewhere for their supplies, and chiefly to the South.

It is interesting to reflect on the changes that have taken place in this respect. Chicago is not only the greatest pine market in the world, but it stands head and shoulders above all others as a hardwood market, yet, until a very few years ago, all the hardwood lumber that supplied this great market came from the northern states. The southern hardwood lumber fields were little known. For years after the civil war a combination of circumstances held down all the industries of the South. There was no business vigor there; no inclination shown by northern or European capitalists to invest their money there. All this has changed. There is now emphatically a southern boom. Some of the northern papers, that for political effect belied, for the purpose of belittling, the southern people, have wearied in their wrong doing, while the ones that still persist in such a course are credited with no honesty of purpose.

Prejudice is often a quality of the strongest minds, which accounts for the feeling that has existed against the hardwoods in the South. A few years ago the agricultural implement manufacturers in the northern states would have scoffed at the idea of putting southern hardwood timber into their products, but now they will not only use it, but often demand it. At least 3,000,000 feet of southern ash will go into the yards of one Chicago manufacturer this season, and this gentleman says he will use no other.

The tricks of the trade to overcome this prejudice, if the methods can be called tricks, are worthy of note. Not long ago a man who had made oars in Wisconsin came to the conclusion that he must look elsewhere for timber. He examined the ash in Arkansas, and though satisfied that it would answer admirably for his purpose, he knew that there was a feeling against it in the European ports. The different foreign governments want the best timber in their oars, and until recently they have specified that the material of which they were made should be northern states timber. This oar-maker, however, decided that he might as well take the bull by the horns first and last. He thought he would make a test case, as it were, so he made a bill of oars out of southern ash. It would not do to tell the buyers across the ocean that the oars grew in the rough in Arkansas, so he shipped them by way of New York, the port from which his former shipments had gone. He waited with a feeling that approached fear and trembling for the result, and at last word came back that the oars had been accepted, and were highly satisfactory. The ice was broken, and after this the tars of several of the foreign powers will handle oars made of southern ash.

The course of a Canadian dealer in timber in getting his first shipment of southern oak into a Scottish market is fully as interesting. This dealer examined the southern oak, and was convinced that prejtdice only barred it out of the hands of European users. He cut several thousand cubic feet of oak timber, some of which was forty-two inches square. This timber might easily have been floated down to New Orleans on barges and then shipped direct to its destination. But had it been so shipped the old prejudice would have met it at the wharfs on the other side and unhesitatingly branded "rejected" on it. The shrewd Scotchmen must be deceived. The timber was shipped from Memphis, Miss., to Detroit, Mich,, thence to Quebec, and loaded at that port as Canadian oak. It was an expensive job as it had to be loaded and reloaded five or six times. Word came back that no better oak was ever received at the ship yards of Scotland. The ash question had been solved and this settled the oak question. Within the next year it is expected that nearly 1,000,000 cubic feet of oak will go down the Mississippi river, and be loaded on vessels at New Orleans for the markets abroad. Looking to extensive foreign shipments, these victories are certainly glory enough for the hardwood interests of the South.

It would be misleading to convey the idea that all the hardwood timber in the South is of the quality of the ash and the oak referred to in the above named transactions. This timber was cut from the bottom lands, but all the oak and ash on this land is not of the same quality. A novice would ruin his trade by cutting indiscriminately. There is nearly as much difference in the ash that grows on the alluvial lands of Mississippi and Arkansas as there is between the calico ash of Indiana and the white variety found further north. All agree that what is called cane ash—or ash that grows among the cane—is by far the best. Between the cane ridges ash is found in large quantities, but the quality of the soil, or more probable, perhaps, the degree of dampness, that produces cane, also produces good ash,

Facts by the column could be cited to show that the hardwood industry of the South has a great future. There are chances of investment in hardwood lands that will bring sure, speedy and profitable returns. It should be remembered, too, that as it was in the North so it is in the South—the land best suited for agricultural purposes are timbered with hardwood. This fact, considering the rapid increase of our population, is worthy of consideration.—*Northwestern Lumberman.*

PATENTS AND PATENT LAWS.

That the farmer who, finding a design for a gate in the *American Agriculturist*, or other journal, has built one from it, should feel aggrieved when some one subsequently calls upon him and demands a royalty, is not at all surprising. Another farmer has read that the patent on a driven-well is not valid, puts down the tubes for such a well, and soon finds himself obliged to pay a royalty, or to stand a suit at law. He of course feels that he has been wronged, and looks upon all patents as frauds. These gates of different kinds, and the driven well, are but examples. There is scarcely any other device used by the farmer, even if of his own invention, for which he may not be called upon to respond—honestly it may be, but often dishonestly—for an infringement of somebody's patent. Such cases have occurred so frequently, especially in the Western States, that farmers—and we do not wonder at it—have become exasperated. They have now, through their granges, clubs, and other associations, made themselves heard by their members of Congress, in their demands for relief. As a consequence bills have been introduced looking to the abolishing of the patent office. Hasty legislation is undesirable at all times, and would be especially unfortunate in the present case. While general attention is called to the matter, the present is a good time to revise our patent laws, and endeavor to remove their objectionable features. Our present system, liable as it is to abuse, is vastly better than none at all. In agriculture alone, the patent inventions have been of a benefit that cannot be computed. The present mowers, reapers, headers, threshers and a host of other farm machines would never have been in use, could not the inventors have been able to patent them. One must be short-sighted who cannot see that patents have done much to advance our agriculture. Our patent system is open to abuse, and no doubt has been made use of by swindlers. That this is the case is not so much the fault of the patent laws, as of the farmers themselves. If the farmers of every township, or school district, had an association, the members of which would make common cause against all frauds which claim to have patents on the commonest farm devices, and instead of compromising these claims, could contest them, this would usually be the last of them. When our patent rules are revised, and the present seems a good time for doing it, we would suggest that much of the trivial stuff that is now patented, be rejected altogether. The present rule seems to be, to give a patent to everything that has not been patented before. A farmer may have used a simple device for many years, some sharp fellow coming along sees it, and procuring a patent, may prevent the farmer from using his own invention, unless he pays a royalty. Abuses of this kind are not rare; they should be made impossible. At present a patent is worth nothing to the inventor, until he has been at the expense of defending it in the courts. The government should keep out all the trivial stuff, and allow patents for only useful and important inventions, and having once granted a patent, and taken pay for it, should defend it in the courts without cost to the inventor. A treaty, which has been made by representatives of our own, European and South American Governments, has been presented to the Senate. The nations in this union or league, agree that a patent granted in any one of these countries, shall be valid in all the others. This scheme seems to be favorable to our own inventors. But the people have something to say, as well as inventors, and before concerning ourselves with our foreign relations, let us have patent laws that are acceptable to farmers and other at home, and not be open to the abuses at present possible.—*American Agriculturist.*

VALUE OF TRADE JOURNALS.

The continual multiplication and consequent cheapening of technical journals and papers with their enlarging circulation among the mechanics of this country afford a strong ground for earnest hope for their future. From the rarity of 50 years ago these journals have increased until to-day there is hardly, possibly not one, branch of mechanical industry that is not represented. Carpenters, masons, iron-workers, machinists, car-builders, painters, lumbermen and many others have them, and to them probably more than any other influence is due the great advancement in their several departments of industry. With the taste for reading there not only comes the supply, but, what is more to the point and of greater advantage, also the thought, the questioning of old methods and styles, and the inquiry if that is best, but also study into the whys and wherefores of all work and processes of work with continual discoveries as to a betterment of the ideas of our fathers, and an improvement of the old plans, and with each discovery comes discussion and deeper inquiry, leading on to something still higher and better. Practical knowledge of any industrial pursuit is a good thing, but he who depends alone on the education of the shop, the bench, the forge or the laboratory, without a solid theoretical knowledge of all the means requisite to the desired end, and all the varied capabilities of the subject matter, the raw material, in hand, will find himself to be contented with the lowest position and smallest pay in the department in which he may work. Boys! apprentices, in any trade, study up all the points of your business if you wish to make successful mechanics. —*Lumberman's Gazette.*

RUSSIAN papers are full of talk about the destruction of forests. Many Russian forests are becoming extinct. Within a century the area of forests in that country has been reduced from 11 per cent in Twer, to 45 in Riazan. In many provinces wood is becoming very scarce, so great has been the destruction. Even the great forests along the Volga and Don, which extend a long way towards the Ural mountains, are destroyed. Only a fringe exists of the once celebrated chestnut wood of Vassilsursk that date back many years.

BURNING DOWN TREES.

In the Southern States, especially Florida, the pine trees are usually burned down when clearing the land. This practice could often be advantageously followed at the North. A hole about twenty inches deep and two and a half feet square is dug on the leaning side of the tree, so that when it falls the opposite roots if any remain unburned will be pulled out. The lower part of the trunk thus exposed is struck a few times with the axe, and left a short time for the pitch to exude. A fire is kindled in the hole. Trees ten inches in diameter are burned off and the roots burned out below the plough line in twenty to thirty hours. A more expeditious way is also given. A hole is dug as before described, also removing eight or ten inches of the earth from the opposite side. With an inch and a half or two inch augur, a hole is bored through the tree at an angle of 45 degrees. For this purpose a ship augur is used, or a long shank may be welded to a common one. The hole thus bored acts as a chimney, and soon not only the side of the tree is on fire, but the chimney part as well. The tree is burned down in less than one-third of the time required by the old method. A strong man can bore nearly fifty of these holes in a day. Stumps are removed in the same manner, and if dry, in a considerably shorter time than trees.—*American Agriculturalist.*

The Pioneers Lumber Company.

The Pioneers Lumber Company was one of the mill concerns at Eau Claire that started out piling lumber with the greatest enthusiasm last season. On account of the advance in westward freights the Pioneers has changed its mind, and is now constructing a new raf shed, which means that its cut this season will go down the river this season in the shape of rafts. When the Pioneers begins to raft its output, only the Sherman Lumber Company's mills will be going into pile, and the lumber from these mills, it is said, would be rafted if it could be got to the water without too much expense. It is rather remarkable that so much calculation for piling and direct distribution was made last year at Eau Claire and Chippewa Falls, when the entire enterprise depended on a matter of seven and a half cents freight rate. It is likewise surprising that the railway freight commissioners can elect to throw overboard the business of an important section like the Chippewa Valley. It is likely that the necessity for catering to Chicago and middle river traffic has pinched the Chippewa valley business out of the question.—*Northwestern Lumberman.*

A Large Contract.

It is stated on the north Pacific coast that the Pine Manufacturers' Association, with headquarters at San Francisco, which controls all the large mills in the Puget Sound region, has made a contract to saw and deliver 15,000,000 feet of lumber at South American points, the stock to be cut to order. The different mills in the association share in this contract. It will be a slight relief to the dullness prevailing at Puget Sound mills, and take a quantity of lumber from the overcrowded San Francisco market. The method of combination pursued by the Pacific coast lumbermen has a tendency towards pushing out for new markets as avenus of relief; for the two associations are bound to keep up the market price at San Francisco if they have to dump their surplus in foreign ports.—*Northwestern Lumberman.*

OF the prospects of the lumber trade the Saginaw *Courier* says: "There is some inquiry for lumber, and the docks are filling up. Sales of about 4,000,000 feet were reported Thursday, all to go east except 1,500,000 feet to Ohio. The prices were not ascertained, It is reported that owing to the stringency of the money market, some manufacturers desiring to realize are shading previous quotations, Probably 15,000,000 feet has changed hands during the week, a good portion of which was coarse stock and sold at $9. It is also reported that eastern parties are negotiating for 25,000,000 feet of coarse lumber, to be used chiefly in box manufacturing.

THE LATE WALL STREET FLURRY AND THE LUMBER TRADE.

The New York financiers, and the bankers of the country outside the metropolis, have taken pains to inform business men that the late collapse of the stock gambling bubble was only a speculators' panic, and that it would work no appreciable injury to general trade and industry. The people have been bid to cast their anxious eyes around and behold the the prosperity everywhere in sight. We are told that the business of the country is in a prosperous condition, money is plenty, crop prospects are good, the new lands of the West are settling up fast, the railroads, especially in the Northwest, are earning as much, and some of them more, than ever before. Attention is called to the marvelous prosperity in the new South, the opening up of Mexico to American trade, the late completion of the Northern Pacific railroad and the impetus thus given to emigration to Montana, Idaho, Washington and Oregon. We are told that the affairs of this couutry have acquired such momentum and prodigious volume, that industry has become so diversified, and commerce so ramified and over-spreading, that nothing in the shape of a flurry in Wall Street can arrest our progress; business will move along in spite of any little impediment like that.

Lumbermen, in particular, are comforting themselves with the assumption that the failure of a few banks and brokers in New York means nothing to them. They call attention to the large amount of building being done, the steady consumption of lumber, the generally prosperous condition of farmers, the new Northwest and Southwest to be supplied with lumber; and finish with saying that if good crops shall be assured this year all will be well with the lumber trade,

It is possible that the rosy view suggested in the foregoing may be the right one to take of the present condition. But let us not be to sanguine about this as not to see the possibilities of an opposite character. In the first place we may be quite certain of one thing: That the "speculator's panic" in New York did have effect outside the circle of the stock gamblers and the bankers that were in collusion with them. The failures that resulted from the flurry were of stupendous character. They were the result of a decline of more than $2,000,000,000 in stock and bond values. When banks fail for $10,000,000 or $12,000,000 each, brokers for from $1,000,000 to $2,000,000, and country banks, and even monster industrial institutions, go down on account of the "speculator's panic," it is vain to say that the general business of the country will be unaffected by it. To say nothing more, the loss of confidence in our fellow man, as Russell Sage says, is an influence that circles outwardly until it ripples in the stillest business pool in the remotest corner of the land. Any one already, by conversing with business men can ascertain that the Wall street trouble has affected business.

Let us inquire how the lumber trade may be affected as the result of a want of confidence in financial stability. For a year or more past there has been considerably more lumber crowded on the market than it has taken with avidity. There was a feeling this spring that values had stood a tension during the winter that was all that they could bear; and since dimension lumber has sold at $1 less than it did last spring, the manufacturers in Michigan have been greatly dissatisfied, have withheld offerings, and largely piled their lumber at the mills. This would not be the condition of things if there was not more lumber to sell than can be worked off at what the manufacturers consider paying prices. While yet this strained state of affairs is prevailing, the New York panic comes. We ask in all candor, will lumber, after what has happened, be likely to advance in price, or even hold present prices, as the mill men think it should? Is it not more reasonable to think that, as green piece stuff on this market hung doggedly at $9 a thousand before the panic it will certainly not go higher now? And it is not probable that country dealers and contractors will get the idea into their heads that it is just as well to wait a while before purchasing beyond present wants? Certainly nobody will load up for the future. The trading in lumber that will be done hereafter for some time to come will be from "hand to mouth," and no boom, and no stiffening of prices ever resulted from that kind of business. Trade may drift along with a fair business doing through the summer, in expectation of good crops, and under the momentum that has been acquired by a vigorous, early start of the buildiug season in the large cities and towns."—*Northwestern Lumberman.*

A Bright Spot in a Dingy Street.

Business took us, a few days ago, throug one of these streets in New York city that one never visits unless from necessity. It is a crowded throughfare where more than one half of the shops are beer saloons and gin mills, and the others devoted to junk dealing and small trades. The upper part of the houses are crowded tenements. One of the dingiest of the buildings retained as a relic of former prosperity, a narrow iron balcony, running across the whole building, at the windows of the second floor. The balcony was occupied by a box for its whole length, perhaps twelve feet long and about a foot wide and high. The box had been filled with soil, upon which grass seed has been sown, and the and there were three young trees of the Ailanthus, one in the middle and one at each end, forming, with the fresh green of the grass and the tropical foliage of the Ailanthus, as pretty a piece of "sub tropical gardening" as could be imagined. This green spot brightened up the street for a long distance, and afforded the eye a refreshing rest, after gazing upon the displays of the second hand clothing stores. Whoever instituted that window box is a public benefactor, and we thank him for the refreshing glimpse of balcony gardening he afforded us.—*American Agriculturalist.*

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain and cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup for children teething. Its value is incalculable It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentery and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system, Mrs. Winslow's Soothing Syrup for children teething is pleasant to the taste, and is the perscription of one of the oldest and best female nurses and physicians in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

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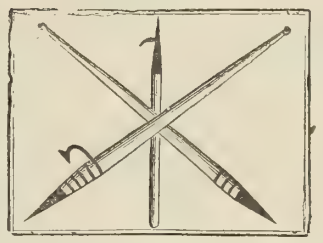
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PETERBOROUGH, Ont., JULY 15, 1884.

OBITUARY.

By the death of the Hon. James Skead, of Ottawa, one of the most prominent men in the lumber business has been removed. For years e held a leading position in the trade in the Ottawa Valley, the very headquarters of Canadian lumbering. His loss will be generally regretted.

Mr. Skead during his active career was President of the Dominion Board of Trade, President of the Ottawa Agricultural Society, President of the Upper Ottawa Steamboat Company, a Director of the Ottawa Association of Lumber Manufacturers, a Director of the Madawaska River Improvement Company, and of the Caughnawaga Ship Canal Company; was Vice-President of the Canada Central Railway Company, and of the Montreal and Ottawa City Junction Railway (now Canada Atlantic), also President of the Ottawa Iron and Steel Manufacturing Co., President of the Agricultural and Arts Association of Ontario, and President of St. George's Society. For many years he was a member of the Municipal Council, and on many occasions was urged to accept the position of Mayor. He was one of the judges on timber at the U. S. Centennial at Philadelphia in 1876, and held many other offices of a similar character. In 1874 he was unanimously chosen Chairman of the Liberal Conservative Association that met in Toronto. He was up to within three years ago President of the Liberal-Conservative Association of Ottawa, and in 1876 was presented with a handsome gold cross of St. George for active services in promoting the society's affairs.

CANADIAN FORESTS.

AMONG other gratifying proofs of the more general interest that is being awakened in regard to our forests and the industries connected therewith, is the publication of a work on "Canadian Forests, Forest Trees, Timber and Forest Products," by H. B. Small, of the Department of Agriculture, Ottawa. There have been previous publications in some of our Provinces on these subjects, but Mr. Small's is the first that embraces the whole Dominion, and treats these matters from a Canadian rather than a local point of view. The information thus collected and given to the public in a readable form, will be found both valuable and interesting, while it is thoroughly trustworthy, resulting from personal observation, for which the author has had exceptional advantages, and from the official records of the Dominion and its several Provinces. The importance of our forests to the community may be seen from the fact that of the industries more especially connected with timber the factories number 17,577, the hands employed being 95,741, and the annual value of the products $95,029,828. The Canadian exports of forest products and manufactures of wood were valued in 1883 at $26,761,892. After the general account of the forests of Canada and their products, the author gives separate descriptions in detail of the timber districts of the Dominion and of each Province, with lists and descriptions of the trees in each, and of the uses to which their timber is put. The minor, though in many cases important products of the woods, also receive due notice, as do "Forest Enemies" from the insect to the ravaging conflagration. In conclusion there is a short but graphic account of the manner in which lumbering is carried on.

While describing the forest wealth of Canada, Mr. Small does not fail to call attention to its rapid diminution, to the want of economy in utilizing it, and to the necessity for adopting means for its conservation and reproduction. This is a question that is forcing itself upon the consideration of all thoughtful minds, and this is true of the lumbermen no less than of others.

The publishers, Messrs. Dawson Bros., of Montreal, have done their part in producing a work, which should be widely circulated and attentively perused.

MODERN FOREST ECONOMY.

THE approaching International Forestry Exhibition at Edinburgh, among its other benefits, has already called forth from the pen of the Rev. John Croumbie Brown, L. L. D., a most useful work entitled "An Introduction to the Study of Modern Forest Economy." This work is really much more than a mere introduction, for the author who has already published many instructive volumes on the subject of forestry, gives us in this book a fund of information in regard to it. One of his chief objects is to show the urgent necessity for the establishment of a National School of Forestry in Great Britain, where scientific and practical instruction can be given for training up forestry officials. He gives a forcible illustration of the want of such institutions from the experience of the Government of India. That Government, which with those of the Australian and South African colonies, sets an example to the Mother country and to Canada, some time ago adopted a system of forest conservancy with a distinct branch of the service to administer it. Neither trained foresters or the means of training them could be found. Those who were selected for the service positively had to be sent to Germany and France to study the science in the schools of Forestry in those countries. It certainly is not creditable to the British Empire that such a state of things should exist.

One part of Mr. Brown's work describes the extensive destruction of forests in Europe and other parts of the world, with the disastrous consequences that have followed. In connection with this he shows how replanting has been extensively adopted as a means of putting an end to droughts on the one hand and to floods and inundations on the other, as well as for the fixing of shifting sands, and not alone is this the case in France and Germany, the leading nations in the science of forestry, but even among people supposed to be so backward as the Spaniards and Hungarians.

The most important part of the work, and the most instructive for this country, is the excellent description of modern forest economy as developed and practiced in many European countries with Germany and France at their head. From this we may learn how constant and regular crops can be obtained from forest as from agricultural land, without the forests being destroyed to get a return once for all at the cost of the sacrifice of this valuable property.

As our author describes the system it is: "All being so arranged as to secure simultaneously, and without prejudice to one or other of them, an improved condition of the forest, a sustained supply of products, and a natural reproduction of the forests by self-sown seed."

What has been and is now being done in those countries can also be done in Canada, and we should learn the lesson before it is too late.

RAFTS ARRIVED.

The Quebec *Chronicle* has the following list of rafts arrived:

June 23.—Flatt & Bradley, deals, boards, etc., Wolfe's cove.

Collins Bay Co., oak, elm, ash, etc, Sillery and Indian Cove West.

Cook & Gibbons, ash, waney white pine, etc., St. Michael's coye.

A. Fraser & Co., (2), white pine, Clint's booms.

D. D. D. Calvin & Co., oak, pine, etc., sundry booms.

June 24.—D. Moore, white and red pine, Cap Rouge.

McLaughlin Bros., red pine, Cap Rouge.

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, June 24, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., N. W., Washington, D. C.:—

300,996.—Bark peeling machine—F. Merziger, Prussia, Germany.

300,829.—Bark stripping machine—F. F. Angermair, Wurtemburg, Germany.

300,780.—Bench dog.—C. C. Johnson, Springfield, Vt.

301,058.—Bit brace—W. A. Ives, New Haven, Conn.

300,771.—Bit stock.—J. S. Fray, Bridgeport, Conn.

300,958.—Fence picket machine—T. Coyle, Apponaugh, R. I.

300,820.—Log rolling machine—G. Wiborn, Manistee, Mich.

300,805.—Saw—G. P. Scott, Sadalia, Mo.

300,907.—Saw handle—R. H. & W. D. Shumway, Lebanon Springs, N. Y.

300,975.—Saw table gage—H. L. Hopkins, Caro, Mich.

300,814.—Saw tooth, adjustable—G. W. Stinebring, Shreve, O.

300,784.—Saw tube—M. F. Lucas, Newton, Mass.

300,786.—Stump extractor—R. M. McMeen, Mount Vernon, Ill.

300,844.—Wood polishing machine—J. Casey, New York, N. Y.

PATENTS ISSUED JULY 1.

301,339.—Bit brace—W. R. Clarkson, Buffalo, N. Y.

301,466.—Chuck, lathe—C. Hopkins & C. E. Van Norman, Waltham, Mass.

301,438.—Clutch, friction—J. H, Elward, St. Paul, Minn.

301,185.—Lathes, back-rest for—J. Tyler & J. W. Railey, Claremont, N. H.

301,241.—Pavement, wood—W. M. Johnson, Dallas, Tex.

301,225.—Saw cleaner, gin—B. R. Edlon, Middle Settlement, Ark.

301,216.—Saw, drag—E. F. Crawford, Honey Bend, Ill.

301,254.—Saw, drag—W. M. McFarlin & C. Plum, Ono, Cal.

301,091.—Saw mill carriages, steam brake for—W. A. Campbell, Frankfort, Mich.

PATENTS ISSUED JULY 8.

301,842.—Clutch, friction—D. C. Walter, Piqua, Kan.

301,695.—Gear-wheel, sectional—I. W. Doeg, New Market, N. H.

301,632.—Lathe-dog—S. N. Silver, Auburn, Me.

301,841.—Saw—F. A. Troeme Becker, Saint Quentine, Aisne, France.

301,787.—Saw-drag—P. N. Applegate, Gosport Ind.

301,715.—Saw mill dog—W. Gowen, Wausau, Wis.

301,472.—Saw mill head block—H. R. Barnhurst, Erie, Pa.

301,828.—Saw mill set works—A. A. Osborn, San Francisco, Cal.

301,696.—Saw swaging machine—D. Donaldson, Rock Island, Ill.

301,481.—Veneer cutting machine—J. H. Costello, New York, N. Y.

301,343.—Saw swage—J. Dinning, Silver Cliff, Colo.

301,431.—Saw tooth, insertible—J. H. Brown, South Trenton, N. Y.

301,095.—Sawing machine, band—F. H. Clement, Rochester, N. Y.

301,123.—Shingle sawing machine—D. F. Hunt, Antrim, N. H.

301,286.—Stump extractor—J. Seitz, Dundee, Mich.

301,233.—Wood-working machinery, device for conveying and precipitating dust arising from—D. D. Drummond, Chicago, Ill.

THE LUMBER TRADE OF GHENT, BELGIUM.

From the Government consular report for April, the following is gleaned concerning the importance of Ghent, Belgium, as a lumber port and distributing point: "Ghent is one of the most important places in this part of Belguim in the lumber trade. Its topographical situation is well adapted to this commerce. The constant building of proper docks, the sheds which encircle these docks, built exclusively for this purpose, and the railway tracks which connect most of the lumber yards, are all exceptionally favorable to the traffic of a commodity which requires a great deal of room and special handling, more so than in the United States, as the people hereabouts are slow to adopt any labor-saving machines for handling such bulky merchandise. In 1882 the importation of timber gave an impetus to the port of Ghent. During the year 200 vessels laden with timber, registering 52,097 tons, and 38 vessels laden with logs, registering 9,893 tons, entered this port. The lumber merchants were deceived in their hope that the year 1883 would be a profitable one for their business; they contracted for large importations from Swedish and Russian ports, relying on a large demand for the projected public improvements; but unfortunately these have been temporarily deferred, and their heavy stock remains largely unsold. Naturally the supply exceeded the demand, a decline in the price took place, which brings a considerable loss to those who handle lumber."

A Smart Mill.

On Monday, May 15, the mill of the Arthurs Coal & Lumber Company at Swissmont, Pa., was tested as to its capacity. The mill is a single circular, 66-inch saw, 4-inch feed, with gang edger, both built by the Stearns Manufacturing Company. The engine was built by the Westinghouse Machine Company of Pittsburgh, and is 14x14. Hemlock logs were used exclusively during the day, ranging from 13 to 34 inches in diameter, taken promiscuously from the pond. During the day S. E. Gill, the treasurer of the company, while endeavoring to put out a fire on the tramway at the slab fire, made a misstep and fell a distance of 20 feet and was severely injured about the face and head. By this accident a delay of half an hour was occasioned. When the tally was made up it was ascertained that the product of the day's sawing by actual count at the tail of the mill was 91,740 feet. The product was in the usual proportions of 4x4, 4x8 and 4x12 stuff as demanded by the Philadelphia market. This is certainly lively work for a single mill working 10¾ hours.—*Northwestern Lumberman.*

THE *Monetary Times* of July 4th says:—The longest raft ever known to have floated on St. Clair river passed down in tow of the tug Mocking Bird last week. It contained 3,250,000 feet, and on Saturday afternoon, within two hours, twenty-four barges passed Amherstburg downward bound, having in the aggregate 3,600,000 feet of lumber.

GREAT NEGLIGENCE.—There is great neglect with most people to maintain a regular action of the bowels, which causes much disease. Burdock Blood Bitters cure constipation.

PROPAGATION OF TREES BY LAYERING.

Layers are really nothing more than a form of cutting, the only difference being that they are allowed to adhere or remain attached to the parent stock—drawing sustenance therefrom until roots are emmitted, after which they are detached and become individual plants. In making layers of trees or shrubs, we bend down a branch, and cover that portion with earth upon which we wish to produce roots.

An incision is usually made on the under side of the branch before it is laid down, and the knife inserted just below a bud if there is one convenient, passing into the wood, and then an inch or more lengthwise of the branch forming what is termed a tongue. A hooked peg, may be employed to hold the layer in place, or a stone laid on it, as it is quite important that the branch be held firmly in place. If the branch is large, the end may be tied up to a stake. It is not often that forest trees, except some ornamental varieties, are propagated in this way, but it is well enough to know how to do it, when necessary to increase the stock of some choice or rare specimen. Layers may be made at almost any season, but they will root sooner if made when the trees are growing rapidly, than at any other time.

Some kind of trees will produce roots when layered without cutting the branch, and exposing the alburnum—in fact, all will, in time, but the surest way to cut the branch as described With some kinds, roots will be emitted so slowly that the layer must remain at least two seasons before it will be safe to sever it from the parent stock. Evergreens may be layered in the same way as deciduous trees, but the operation should always be performed during the period of active growth, else the wound made on the layer is likely to be covered with resin, which may prevent the emission of roots.

Sometimes a part of a tree or a small branch will vary from the original; when this occurs on a large tree and where the branch cannot be made to reach the ground, we are compelled to elevate the soil, or some similar material to the part we wish to propagate, unless it is some species which can be readily propagated from cuttings buds, or grafting. If we desire to obtain a layer, we have only to place a pot or box of soil near the branch, so that it can be covered with earth, the same as if near the ground. After the branch in layered, the soil surrounding it must be kept moist until roots are produced. If the pot is surrounded with cloth or moss, it will in a measure prevent the earth from drying, and therefore less frequent waterings will be required.—*American Agriculturalist.*

Bush Fires.

Bush fires are already doing much damage in the lumbering districts of the Ottawa Valley, and yet we are only at the beginning of the heated midsummer period in Canada. These fires are too often caused by criminal carelessness. Millions of dollars damage have resulted from the want of ordinary care on the part of individuals who kindle camp fires or light their pipes in the woods. Too often the railway companies, who do not look after the roadside flames kindled by sparks from their locomotives, are to blame. The forest laws of Sweden should be carefully studied and adapted to our country.—*Witness.*

A Great Consumption of Sapling Pine.

Keene, N. H., is the centre of a great tub and pail industry, which largely consumes sapling pine. A contemporary says that there are 40 pail and 30 tub lathes in operation in Cheshire county; each lathe turns out on an average 100,000 pails a year, consuming 450 cords of saplings, which gives a product of 4,000,000 pails from 18,000 cords of pine. The 20 tub and bucket lathes use a proportionately large quantity, and as great quantities of staves are sawed and sold for use outside the county, it is probable that 40,000 cords of sapling pines are cut every year.

Down in Dixie.—The wife of Mr. J. Kennedy, dealer in drugs in Dixie, was cured of a chronic cough by Hagyard's Pectoral Balsam. The best throat and lung healer known.

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SETTING AND FILING SAWS.

Having had charge of table saws for a good many years, and wishing to get all the work out of them obtainable, I have experimented considerably in shape of teeth, setting teeth, swaging teeth, jointing saws, etc., a few points in regard to which it may do some one good to know. Firstly, a saw should fit the mandrel, not tight, but slip on without play. Next, it should be jointed up true, which I do by holding a piece of one and one-quarter gas pipe, twelve inches long (the size or length is immaterial except that that is the handiest size)square against the edge of the teeth. The saw should run full speed. By taking hold of each end of the pipe and crowding down on the table top and up to the saw, it is soon jointed up round and with the corners of the teeth full, which will not be the case when a stone is used, as the saw eats into the stone and rounds the very part that one wants full. The gas pipe is soft iron and does not glaze or harden the points of the teeth. I file the front of the teeth nearly square across the saw, but file from both sides. The old rule for slitting saws is to have the front of tooth line to a circle of half the diameter of the saw.

I file to a circle of two-thirds the diameter and leave the teeth quite crowning the back to give them strength. I take off the saw to file and set. I prefer setting to swaging saws. I set with hammer, by laying the saw down on a little table with a flat piece of steel, very hard, beveled off on the edge to an angle of 25 degrees; put the point of tooth three-sixteenths over, and hit it directly on the point. A saw set in this way runs much easier than to have the set extended back on the tooth. We make on one table 5,800 cuts through two and three quarter inch white oak plank, 28 inches long, each day of ten hours, with 14-inch saws. The mandrel should be lowered so that the saw does not stick more than one-quarter of an inch above the work.—*Correspondent of Leffel's Mechanical News.*

WHITEWOOD.

Whitewood is gaining favor rapidly. Not many years ago it was used in this vicinity chiefly for coffins and waggon box boards. Further south in the sections where the wood grows, it has been used in finishing to a considerable extent, but builders who could readily get white pine, discarded whitewood.

Until recently, for finishing purposes and for the manufacture of sash, doors, and blinds, whitewood was little thought of north of those sections where it grows plentifully. A representative of one of the largest sash, door and blind factories in the country recently said in this office that if he were building he would have little choice between pine and whitewood for the purposes above mentioned. He admitted that his interest is purely identified with white pine, and that he would not admit openly that whitewood is the peer of pine; such, however, in his opinion, is a fact. This a big admission to come from such a source, but one that is based on a good foundation.

It can be easily understood why whitewood can be used successfully for many purposes for which pine is employed. It is more inclined to twist than pine, but this is not much of an objection where it can be used in small pieces, or if in large ones securly fastened. Even gum, the most rebellious wood that grows out of the ground, if properly nailed, answers for finishing admirably. Whitewood is very easy to work—it probably ranks next to pine in this respect—takes a good finish and works a close joint. There are complaints against cypress for sash, doors and binds because, it is said, it is too hard a wood to drive together and make a perfect joint. Too much work must be put on the pieces where they come in contact to make them fit closely. In pine work this extra work is unnecessary. The wood is so soft that it readily gives, and the tight joint is at once produced. There are others that claim that such a fault with cypress not exist; but that it does somewhat there can be no question. Not that perfect cypress sash, doors and blinds are not made, but it requires a little more attention and labor to make them than it does from pine. In regard to softness, whitewood probably ranks next to pine; it is not quite so easily worked as pine and a little more easily than cypress.

The easiness with which whitewood can be smoothed is greatly in its favor, as it is prepared at light cost for the paint. Its ability to hold paint well is questioned, and justly where the lumber is used on the outside of the building. Place two boards, one pine and the other whitewood, side by side in an exposed condition, and paint them at the same time with the same number of coats, and the pine without question would look the better for the longer time. For inside work, though, any difference that may exist in this regard would not count for enough to take into consideration. The paint holding quality of whitewood is good, while in white pine it is extra good.

The cost of whitewood is decidedly in its favor. When clear whitewood can be bought for $20 per thousand less than clear pine the difference shows up in the light of a big inducement to the consumers of lumber. With many there would have to be big advantages in favor of pine to counterbalance this difference in price. Twenty dollars in a thousand of lumber is a good deal of money, and when such a difference exists there ought to be more points in favor of the higher price lumber than in this case really exist. As the prices of different kinds of lumber are now raging, whitewood, considering its value, is the cheapest finishing lumber to be had.

With the popularity that whitewood is winning it is not to be wondered at that whitewood stumpage is increasing in value, and it may be expected to be worth still more. Not many years ago it did not take much money to buy as much timber as any man cared to own; and few cared to own much of it; but now it is sought not only where it can be immediately gotten at, but in the out of way places which will necessitate the timber standing until improvements in streams and in the way of building railroads are made. It has also come to light it is not so plentiful as many, a few years ago, supposed it to be. In some of the best Tennessee districts a good share of the available whitewood has been cut; a big proportion of it when it is considered how short a time the whitewood mills have been at work.—*Northwestern Lumberman.*

A NEW SOURCE OF ASH SUPPLY.

Ash timber plays an important part in house building and manufacture. As a flooring and finishing wood, it is the peer of any that grows in the forests.

It is a fine cabinet wood for certain classes of work. For agricultural implements, wagons, and other manufacturing uses it has become a regular stock material. But there is one form in which ash is employed that renders it indispensable, and that is for oar making. A white ash oar is the best that ever strained the muscle of man. This is on account of its long, tough grain, and its extreme lightness when perfectly seasoned. Ash is the only wood used for this purpose, because it is not only tough and light, but it does not absorb water when seasoned, and consequently does not warp. It is also not liable to sliver by wear of the hands. Such is the exclusive adaptability of this wood for oars, that when the ash supply is exhausted, steel or other substitute for wood will have to be used.

The making of oars is a particular and separate industry. The oars of this country are preferred, and are shipped all over the world, because our ash is considered better than any other for making oars. The British and French navies, as well as the merchant marine of all Europe, are supplied from this country. Ohio and Michigan ash has hitherto contributed to the manufacture of oars, but now it is growing scarce, and operators are reaching around for the discovery of new supplies. It is now thought that the ash growing in the lower Mississippi bottoms is admirably adapted to oar making, and if for that purpose, certainly for any other to which ash may be applied.

Mr. J. LaDue, whose headquarters are at East Saginaw, Mich., is probably the leading oar maker in the country. He has four mills, one at Breckinridge, Mich., one at Montpelier, Ohio, a third at St. Mary's, Ohio, and a fourth at Carson City, Mich. He not only supplies a vast demand in this country, but ships quantities to Europe. His make of oar is used in the British and French navies. Latterly, Mr. LaDue has found it difficult to find timber enough of the right sort, and at reasonable prices, to keep his four mills running. This has led him to go South, for the purpose of investigating the ash that abounds on the bottom lands of the Mississippi and Yazoo Delta. After spending some time in the northern half of the Delta, he recently returned, bringing a good record of his experiences, and specimens of ash which were cut in Coahoma county. Mr. LaDue and his companions travelled over portions of Quitman, Tunica, Coahoma and Sunflower counties and found large and abundant growths of ash, besides oak and other timber. The ash he regards as of excellent quality for the various uses to which it is put, and much of it especially adapted to oar-making. The latter statement is certainly corroborated by the specimen left at this office.

It is stated that Mr. LaDue will purchase large tracts of land in upper Sunflower county, and proceed immediately to put in machinery for getting out oar timber, and that he will also utilize the oak and other merchantable woods. It is understood that he is highly pleased with the outlook. He had been led to think by timber-lookers who had preceded him that the ash of the Mississippi and Yazoo Delta was of such a heavy variety, when seasoned, that it would not answer the purpose for oar-making; but his personal inspection has convinced him to the contrary. He is also happily disappointed as to the quantity of ash to be found in the Delta, the growth being much more abundant than he had been lead to expect.

If Mr. LaDue has not overstated the matter through enthusiasm, there will be others who will seek the Delta for a supply of ash. Already quite a movement in the direction of the Mississippi bottoms on the Arkansas side has been begun. Considerable ash is coming to this city from the vicinty of Helena, and the Helena Lumber Company, with Moline, Ill., connections, has lately completed a mill for the cutting of the ash in that vicinity and shipping it north. Without a question there is to be an increase of going South for ash. The Mississippi bottoms will be the favorite region of ash supply, because it is to be found there in greater abundance than elsewhere in the South, accessible by river and rail to the manufacturing centres of the Northwest.

The Mississippi and Yazoo Delta, now that it is known to abound in ash of excellent quality, is sure to attract a large share of attention from hunters for that timber.—*Northwestern Lumberman.*

WATER POWER IN AMERICA.

The extraordinary development of waterpower for economic purposes is an American idea. In no other country has it been so successfully utilized. This will be apparent by considering some of the rivers which have been damed for the benefit of mankind, and the force which they furnish reduced to the standard of horse-power: The Passaic at Paterson, New Jersey, 1,000 horse power; the Merrimac at Lowell, 10,000; the Mohawk at Cohoes, 14,990; the Connecticut at Hadley, 17,000; the Androscoggin at Lewiston, 11,000; the Housatonic at Canaan Falls, 3,000; the Mississippi at the Falls of St. Antony, 15,000; the Oswego at Oswego, 4,000. The sum total of these is 75,000 horse power, as estimated at a given point on each river But this is used over again on an average not less than three times. This would show a large total of 250,000 horse power. There are also very many smaller streams in all the hill sections of the country which are utilized and may furnish, used and unused, power equal to the last named total of 250,000; thus giving a grand total of 500,000 horse power; distributed overr a wide extent of country and supplying in their way, the wants of 50,000,000 people.

But these are only in minor powers, so to speak of the hills and valleys. The grand dominating power that could absorb them all and still have room to give hospitable refuge to four times as many remains to be noticed. It It is the Niagara river. From data furnished by the United States lake survey bureau in 1875, it appears that the average flow of the river above the falls is 10,000,000 cubic feet per minute. Converting this into horse power under a head of 200 feet, we have a grand aggregate of 3,000,000 horse power—a mighty force that would supply the economic wants of 200,000,000 of people.—*Lumberman's Gazette.*

THE CYPRESS.

The cypress, of which there are three varieties, the red, and white or bald, is gaining in favor every day in the south It is heavier than white pine, as a substitute for which it is being used, by several hundred pounds more per thousand feet. This wood contains a very small amount of resin, and a very high polish can be given it; in fact, because of its not being affected by moisture, it is being used for cisterns, hogsheads and sugar, molasses and honey barrels. The red cypress is the favorite, and some of it is so heavy that it will sink upon being placed in the water. The white variety is much lighter and will float after being deadened shortly before cutting, but it has not the firm grain of the red. The red cypress has a straight trunk with a small top, and the bark cut has a reddish tint.

In the south cypress is used principally for shingles and sash, door and blinds; it also makes a handsome finishing lumber when used with white or yellow pine as a contrasting material for door and window casings or for wainscoting. Many of the shingle manufacturers have only their shingle mill, and cut up entire sound logs into shingles alone, and thus, while producing fine shingles, waste much valuable timber that might be put to better use. —*Ex.*

TO SAW ROUGH TIMBER.

All tough timber, when the logs are being sawed into lumber of any kind, whether scantling, boards or planks, will spring badly when a log is sawed in the usual manner, by commencing on one side and working toward the other. In order to avoid this it is only necessary to saw off a slab or plank, alternately, from each side finishing in the middle of the log. We will suppose, for example, that a log of tough timber is sawed into scantling of a uniform size. Let the sawing be done by working from one side of the log towards the other, and the the ends of the scantling will all be of the desired size, while at the middle of them will measure one inch broader than at the ends. After the log has been spotted, saw off a slab from one side; then move the log over and cut a similar slab from the opposite side. Let calculations be made by measuring before the second is cut off, so that there will be just so many cuts, no more and no less, allowing for the kerf of every cut. If the log is to be cut into three inch scantling for example, saw a three-inch plank from each side, until there is a piece six and a quarter inches thick left at the middle. The kerf of the saw will remove about one-fourth of an inch. When a timber log is sawed in this way, the cuts will be of a uniform thickness from end to end. Now turn the log down and saw the cuts the other way in the same manner, and the scantling will not only be straight, but of a uniform size from one end to the other, if the saw be started correctly. —*Sine's Lumberman's Form-Book.*

English Patents and Canadian.

According to the new English patent law, specifications of patents are to be published in blue-book form, which is to be offered for sale before the patent is granted. *Engineering* condemns the new arrangement as likely to afford opportunities to unscrupulous persons who would not be slow to avail themselves of their advantage. We, however, do not share the pessimistic views of the journal mentioned. Referring to our own country we are sure that a good many suits for infringement on patents would never have arisen if the Ottawa Patent Office had similar regulations in force.—*Ex.*

THE smart engineer who knows a boiler cannot be exploded if a full guage of water is kept in it, and who, to prove it, sits on the lever of safty-valve while he eats his lunch, is liable to be transported very suddenly to the land where "firing" is a continous business, unrelieved by boiler explosions or any other kind of pleasant recreations.—*Ex.*

Chips.

It is estimated that the output of saw logs in the Ottawa valley this year will amount to considerably over 500,000,000.

There are 250,000 trees in full foliage along the 150 miles of avenues and streets in Washington.

S. C. Bryant, of Tawas City, lately sold eastern parties 1,000,000 feet of lumber and from Au Sable 600,000 feet. The terms of both sales were private.

Lumbering on the Saginaw Bay and Northwestern railway will be continued all summer three or four parties. The amount of logs handled over the road this year will reach nearly 100,000,000 feet.

The saw mill and shingle factory of Joseph Leech, at Blurvale, Canada, was entirely destroyed by fire on the morning of June 21. Loss $2,500; no insurance. The origin of the fire is unknown.

Alexander Gibson, the New Brunswick "Lumber King," cut 38,000,000 feet of logs on the river Nashwash in addition to 90,000,000 being got out on the St. John River and its branches by other operators.

The Winnipeg Lumber Company have now 13,000,000 feet of logs at Crookston, Minn., which they propose to float down the Red Lake River and Red River to Winnipeg. They are mostly white pine logs of the best quality.

A very large quantity of fine black ash timber was recently loaded on pine ratfs and shipped from Quebec to England. This timber is fast rising in favor in that country for furniture and upholstery on account of its strong and beautiful grain.

The Scottish Canadian Lumber Company's logs which were offered for sale by the receiver of the company a short time ago were purchased by E. B. Eddy. The total number of pieces was 140,000. They will be cut up at Skead mills, New Ottawa, this season, for the New York market.

Buildings to involve a total cost of $652,000 are under way, at Winnipeg, Man. Among them is a post-office to cost $150,000; a city hall, $100,000; the Manitoba Loan Company's buildings, $75,000, and a tenement flat building, erected by the Manitoba Investment Company, to cost $80,000.

J. Cummer & Sons are building a logging railroad from their mill at Cadillac, Mich., to Muskrat lake. They recently purchased a Shay locomotive for use on this road. It is of a new design, the boiler being upright, the flues lying horizontally. It is thought to possess great advantage over the horizontal boiler for heavy grade work.

It is stated by a railway journal that a company three years ago bought 6,000,000 feet of black walnut on the stump, near Waynesville, N. C., for $3 a tree. The extension of the Western North Carolina railway will enable the purchasers to market the walnut during the present season at the rate of $150 a tree. That deal was better than one on the stock board.

The Chippewa Lumber Company keeps an armed force of men at the dam they have built across the Chippewa river. They are having trouble about their dam, and the fish other than government planted in the lake are dying on account of this dam. They also kept a force of men on Friday night watching their lumber yards and mills for fear some one would set fire to them. They receive no sympathy.

The finest floors are said to be seen in Russia. For those of the highest grade tropical woods are exclusively employed. Fir and pine are never used, as in consequence of their sticky character they attract and retain dust and dirt, and thereby soon become blackened. Pitch pine, too, is liable to shrink, even after being well seasoned. The mosaic wood floors in Russia are often of extraordinary beauty. One in the Summer Palace is of small squares of ebony inlaid with mother-of-pearl. A considerable trade is done in Danzig and Riga by exporting small blocks of oak for parquet floors. There is an active demand for these abroad, but none in England.

LUMBER NOTES.

An Ottawa despatch says: The logs on the upper Gatineau drive are pretty well into the Desert. Mr. Brigham, who is superintending it, is making good progress with the work.

An immense number of lumber trains passed down from Pembroke during the week, containing on average about 19 cars.

The water in the Coulonge this season is remarkably low and has considerably upset the calculations of the lumbermen. A large quantity of timber is stuck at "Ragged Shute," and may be said to be practically stuck for the season. The greater portion of it is owned by Mr. R. W. Thistle.

A considerable quantity of logs are stuck on the Black River drive, and it is doubtful if they can be got out.

The Messrs. McLachlin have got their Bonnechere drive into Round Lake, and cleaned out the Madawaska Creek last week.

All the Madawaska River drive went over the Palmer Rapids last week with the exception of the York branch where there is still a considerable quantity. It is doubtful if Messrs. Bronson's logs will be got through this season, as the stream is very low.

It is reported that Martin Russel's limits on the Bonnechre have been sold to Messrs. Pattee & Perley for the sum of $60,000.

Mr. W. D. McAllister's raft, taken out on Indian River, and which reached New Edinburgh last week, has made the fastest trip on record. It was taken from Pembroke to New Edinburgh in two weeks by 42 men and the pilot Mr. Baptiste Tessier. The timber, which is of first-class quality, was purchased by Mr. McLaren, and will be manufactured at his New Edinburgh mills. The raft contained 227 cribs.

Reports from Quebec speak of the timber trade as very languid, and when the vessels now in port have cleared a still duller season is expected. One raft of white pine, for which 29 cents was offered in 1882 and refused, was sold last week for 22½ cents. Another raft of white pine, two-thirds square and one-third waney, about 18½ inch, for sold for 23 cents.

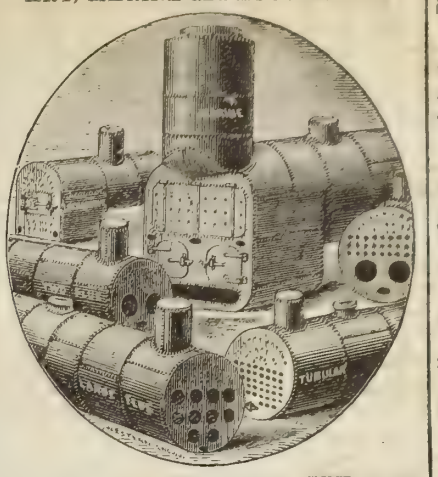
Cheap Timber Lands.

The St. Ignace *Republican* lately remarked thus: "Hon, C. F. Moore, of St. Claire, a prominent Saginaw lumberman, and owner of many thousand acres of pine and hardwood land in Mackinac and Chippewa counties, visited this office, Thursday, on his way home from Sault St. Marie, where he had been bidding for certain lands at the annual tax sales. Both from him and Supervisor Kaye, of Newberry (also in the city on Thursday), we learn that many a forty went for ten cents, the value or worthlessness of the parcel failing to disturb the ruling price. To instance: The Hill lands, delinquent for two or three years, on which the aggregate taxes amounted to a very large sum were, most of them bid in at a ridiculously low figure by Hill's agent. In short, the bidders were a harmonious lot, none poaching on another's intended preserves."

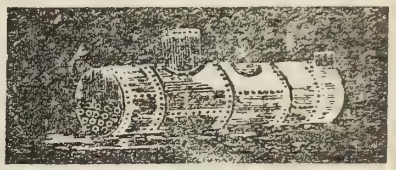
For the past two or three weeks fires have been raging in the timber at Turtle Mountain, Manitoba, and has worked its way south into Dakota. The damage is extensive and can hardly be calculated. There is considerable annoyance felt on the part of the settlers at the action of the government in prohibiting the removal of fallen timber, as had it been removed the fire would have been checked and prevented from spreading. Fires are also raging near the Eagle Hills, and have destroyed considerable property.

The Vermont forestry commission has issued a circular asking the earnest co-operation of all practical men in the different sections of the state, to furnish full information as to the decrease of forest acreage, the amount of wood used for fuel and exported, the manufacture of lumber, the injuries inflicted by forest fires, the diseases affecting forest trees, the effect of the removal of the wood upon streams, springs and ponds, and similar information, which when fully compiled, will be of much interest to the public.

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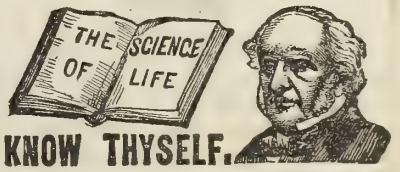


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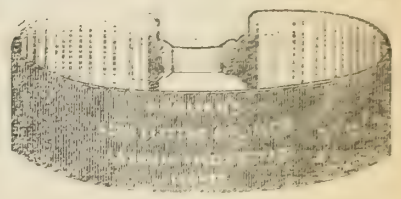
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A FEW SIMPLE TESTIMONIALS THAT SPEAK FOR THEMSELVES.

Ottawa, September 3rd, 1883.
A Norman, Esq.—Dear Sir,—I have experienced considerable benefit from your appliances. I feel stronger and better every day.
Yours truly, R. E. HALIBURTON.

Peterborough, October 15, 1883
A. Norman.—Dear Sir,—Soon after I commenced to use your Electric Appliances, they opened my bowels, cured my cough and cold, relieved my head and considerably relieved my catarrh in consequence. The discharge from my head and chest are now easy, and I feel altogether better. My digestion has improved, my stomach less sour and windy, and I am less troubled with lascivious and vivid dreams. I had previously tried almost all the advertised patent medicines without deriving any good.
Yours truly, J. GREEN.

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ALL SUMMER COMPLAINTS
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Market Reports.

TORONTO.

From Our Own Correspondent.

JULY 10.—Complaint of the dullness of trade is general, dealers all agree that the lumber trade is in a bad shape just now, although I am of the opinion that this sluggishness in the lumber trade will only be of a temporary character. The Semi-Centenial celebration here demoralised trade to a great extent, and nearly all with whom I have come in contact agree that it has not been productive of any good to our city in any shape. Prices at the yards rule about the same, except on the coarse grades of boards and plank, there is quite a glut in the market of this class of lumber. 1½ and 2 in. cut up is in good demand for factory use in car load lots, and some good lots have sold as high as $26.00 per M., and clear and picks at $36.00.

Over our docks lumber moves slowly and much of that now shipping is far from being dry. The demand for stocks in western Ontario is fairly good. Bill stuff finds ready sale, and bills of dimension stuff cut to order is not being furnished up to time, in fact many of our mill men do not seem to realize the value to be attached to a contractor's time who has to have his contract finished by a certain date, or incur penalties for nonfulfilment of contract. A little more consideration on the part of manufacturers in this respect would be of great benefit.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
Scantling and joist, up to 16 ft	13 50
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 00
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	20 00
" " " 32 ft	21 00
" " " 34 ft	22 50@22 50
" " " 36 ft	24 00
" " " 38 ft	27 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	24 00
" boards "	20 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 00
Three uppers, Am. inspection	35 00@40 00

B. M.

1¼-inch flooring, dressed	30 00
1¼ " " rough	16 00
1¼ " " dressed	25 00
1¼ " " undressed	15 00@15 00
1 " " dressed	22 00
1 " " undressed	16 00
¼ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ₩ M	2 90
Sawn Lath	2 75

MONTREAL.

From Our Own Correspondent.

JULY 10.—The dullness in general trade seems to be affecting the demand for lumber, and few buildings are in course of construction, and few contracts are giving out. The visitors here for the St. Jean Baptist celebration, contrary to expectation, left very few orders, and very little has been going to the United States. Owing to the scarcity of grain and sailing vessels the demand for ship lining boards has been almost nothing. Laths have been in demand and stocks are getting low so that prices are tending upward. We now quote ex yard as under:

Pine, 1st quality, ₩ M	$35 00@40 00
P ne, 2nd " ₩ M	22 00@24 00
Pine, shipping culls, ₩ M	14 00@16 00
Pine, 4th quality deals, ₩ M	11 00@12 00
Pine, mill culls, ₩ M	10 00@12 00
Spruce, ₩ M	10 00@13 00
Hemlock, ₩ M	9 00@10 00
Ash, run of log culls out, ₩ M	20 00@25 00
Bass, " " ₩ M	17 00@20 00
Oak, ₩ M	40 00@50 00
Walnut ₩ M	60 00 100 00
Cherry, ₩ M	60 00@80 00
Butternut, ₩ M	35 00@40 00
Birch, ₩ M	20 00@25 00
Hard Maple, ₩ M	25 00@30 00
Lath, ₩ M	1 75@ 2 00
Shingles, 1st, ₩ M	3 00@ 0 00
Shingles, 2nd, ₩ M	2 50@ 0 00

SHIPMENTS.

The shipping of lumber both to the home market and South America has been going on pretty lively since our last report, but now the demand for freight is pretty slack. Rates to South America are somewhat easier and are now quoted at $13 to $13.50. Recorded shipments have been as follows: Bk Bertie, Penarth, f.o.b. 9,921 pcs deals and 692 ends; Bk Haken Jarls for Buenos Ayres, 21,918 pcs pine lumber; SS Lake Huron for Liverpool, 460 pcs lumber; SS Buenos Ayres for Glasgow, 60 pcs oak; SS Ravan for Liverpool, 19,522 deals and 178 ends; SS Ashbrooke for Hartlepool, 18,558 deals, 2,550 ends and 10,956 sidings; SS Sarmatian for Liverpool, 603 deals; SS Brooklyn for Liverpool, 8,256 deals; SS Oxenholme for Liverpool, 10,700 deals; SS Scotland for London, 1,500 deals; Bk Norway for Buenos Ayres 390,260 feet lumber; SS Ravenhill for Barrow, 926,942 feet lumber; Bk Joy for Buenos Ayres 444,771 feet lumber; Bk Templar for London 20,460 deals; SS Sarnia for Liverpool, 3,080 boards 800 strips and 3,110 deals; SS John Knox for Liverpool, 7,410 deals; Bk Adeliade for Operto, 310,942 feet deals; SS Celina for Glasgow, 2,019 pcs deals; Bk Blue Bird for Buenos Ayres, 309,207 feet deals.

CORDWOOD.

Demand has been fair and prices are well maintained, the corporation awarded the contract for a round lot of maple required by them to Mr. Graham at $6.87 per cord. We continue to quote:

Long Maple	$ 6 00
Long Birch	5 50
Long Beech	5 00
Tamarack	4 50

WINNIPEG.

The *Commercial* of July 1st says:—There is no change to report in the state of this trade. Mills are still running, and have quite a quantity of orders ahead. Sales during the past week have been quite up to the average, and are expected to keep so for weeks to come. No reliable scale of prices can as yet be given.

Pine lumber, 1st, common boards, dressed	$26 50
do, 2nd, dressed	25 50
do, 1st dressed rough	26 50
do, 2nd do.	25 50
Sheating, rough	25 00
Timber 16 feet and under	24 00
do. over 16 feet, for each additional 2 feet.	1 00
Dimension and joists 16 feet and under	24 00
do, do, over 16 feet for each	1 00
Fencing	25 00
2 and 3 in. battens	30 00
A. stock boards, all widths	50 00
B. do. do.	45 00
C. do. do.	40 00
D. do. do.	35 00
1st clear, 1, 1¼, 1½, and 2 inch	60 00
2nd do. do. do.	56 00
Window and door casings	50 00
Base boards, dressed	50 00
1st pine flooring, siding and ceiling	40 00
2nd do. do. do.	35 00
3rd do, do. do.	30 00
½ inch split siding, dressed	30 00
Spruce lumber—timber 16 feet and under	22 00
do. over 16 feet for each additional 2 feet	1 00
Dimension and joists, 16 feet and under	23 00
do do. over 16 feet, for each additional 2 feet	1 00
Boards	22 00
1st flooring, siding and ceiling	28 00
XX shingles	5 25
Star A shingles	5 25
X shingles	5 00
A. do.	4 50
Lath	4 50

CHICAGO.

The *Northwestern Lumberman* of July 5, says:—The docks have been crowded all the week, causing a dragging market; or perhaps it is more accurate to say that the drag has caused a crowded market, since the receipts have been less than during the week previous. The arrivals continue to be mostly piece stuff and No. 2 inch lumber, but little really good stock putting in an appearance. This is becoming a settled characteristic of offerings; good lumber is piled up at the mills while common and coarse is shipped to this market. A large proportion is simply flat common.

Shingles have ceased to make any stir on the market. Not so many are arriving as earlier in the season, and prices are so low that no fighting is had over them. By common consent a range has been given prices, and prices are named within these limits to suit the temper of the buyer or the cearacter of the shingles. Lath is treated in much the same manner.

Quotations are as follows:

Piece stuff, green	$ 8 50@ 9 00
Long timber, green	10 00@10 75
Boards and strips—No. 2 green	10 00@12 00
Boards and strips Medium, green	12 50@14 50
Boards No. 1, green	15 00@18 00
High grade	18 00@24 00
Shingles, standard	1 75@ 2 00
Shingles, extra	2 00@ 2 20
Shingles, clear	2 80
Shingles, cedar	1 50@ 2 00
Lath	1 50@ 1 65

AT THE YARDS.

A more featureless trade than that prevailing in the yards of this city at the current time has not been known for years past. A moderate movement is going on, but not enough to prevent an appearance of dullness. The local building requirement is drawing on general stocks to a large extent, but the yards that cater to this trade get the bulk of it, so that houses whose business is mostly with the country scarcely realize how important a factor in the total consumption it really is. Buildings that require heavy contracts for joists, studding and interior work are largely provided for outside the distributing wholesale trade, so that they do not appear largely on the surface of general business. It is a dull contractor this year who does not figure close on a big bill, and the moderate sized houses, who have all they can attend to in order to hold their country retail yard trade, do not get even a smell of such bills. Some dealers say that current trade is as good as it usually is this season of the year, while others assert that their sales show a considerable falling off from the corresponding time last year. Shaking all the testimony together, we can draw the conclusion out of the mass that business is rather quiet—more so than it would be if there was no financial stringency and no president-making job on hand, to say nothing of the partail failure of crops some sections last year. Yet the slow movement of lumber would be a rush in other places than Chicago, the aggregate each day and week, after all, footing up a very respectable amount.

In consonance with the foregoing view of the situation was the course pursued by a prominent house in this city. It has among its customers heavy retail dealers, who are always anxious to take the main chance in buying. Though trade is slow, this house is sending advice to its customers to delay stocking up a little longer, for certainly lumber will not be any higher than it is now, and probably it will be considerably lower. Thus this concern is advising its correspondents in a way that will be for the latter's good, though such a course is a check to present trade. It is likewise an illustration of the confidence this leading concern has in lower prices.

During the month of June there was a large accumulation of yard stocks. Receipts at this port have been heavy, and they have been taken care of by the trade, though the market has dragged. When the returns from the yards for June are all in it is probable that the footings will show a great increase of stocks on hand.

No remarkable change in prices have occurred during the week. There is the same tendency to weakness on the dimension and common stock that has prevailed all the season. The slackness of demand from the country tends to make the merchants anxious to sell, and firm figures become more or less a secondary consideration when prices are to be named. The weakness of the cargo market will serve to make yard prices still more tender and pliable.

There is an increasing movement of yellow pine to this market. Mobile has forwarded its first contingent in the shape of a car load of strips from the Danner Land & Lumber Company, consigned to W. C. Ott, 236 South Water street.

Receipts of lumber, shingles, etc., for the week ending July 2, as reported by the Lumberman's Exchange:—

	RECEIPTS. *Lumber.*	*Shingles.*
1884	44,447,000	20,543,000
1883	40,076,000	16,549,000

FROM JANUARY 1, 1884, TO JULY 2, 1884, INCLUSIVE.

	RECEIPTS. *Lumber.*	*Shingles.*
1884	653,269,000	351,820,000
1883	567,388,000	403,994,000
Increase	85,881,000	
Decrease		52,174,000

LAKE RECEIPTS FOR THE WEEK ENDING JULY 2.

Lumber	50,934,000
Shingles	36,150,000
Lath	2,003,000
Posts	473,853
Railroad ties	33,943
Wood, cords	2,042
Bark, cords	725
Slabs, cords	1,400
Telegraph poles	15,500
Spars	

STOCK ON HAND JUNE 1.

	1884.	1883.	1882.
Lumber & timber	378,330,782	327,939,628	372,711,591
Shingles	273,316,625	152,787,642	167,508,300
Lath	34 736,110	40,435,868	21,907,726
Pickets	902,905	1,454,390	1,093,328
Cedar posts	263,873	311,853	238,832

UNKNOWN TO SCIENCE.—That preparation is undiscovered which can surpass Dr. Fowler's Extract of Wild Strawberry as a cure for cholera morbus, dysentery and Summer complaints.

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ₩ M	$53 00@58 00
Pine, fourths	53 00@58 00
Pine, selects	53 00@58 00
Pine, good box	22 00@33 00
Pine, 10-in. plank, each	00 42@00 46
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 21
Pine, 10-in. boards, 16 ft., ₩ M	28 00@32 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	16 00@18 00
Pine, 1-in. siding, select	43 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ₩ M	40 00@43 00
Ash, second quality, ₩ M	25 00@30 00
Cherry, good, ₩ M	60 00@85 00
Cherry, common, ₩ M	25 00@35 00
Oak, good, ₩ M	40 00@43 00
Oak, second quality, ₩ M	20 00@25 00
Basswood, ₩ M	25 00@30 00
Hickory, ₩ M	40 00@40 00
Maple, Canada, ₩ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ₩ M	38 00@40 00
Shingles, shaved, pine, ₩ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 4 75
" clear, "	0 00@ 3 25
" cedar, mixed	0 00@ 3 50
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ₩ M	0 00@ 2 75
Lath, spruce, "	0 00@ 3 00

OSWEGO, N.Y.

From Our Own Correspondent.

Trade is very quiet and in most grades a decline of from one to two dollars per M feet has occurred, since the early spring. We send a corrected list of present prices. Collections are slow, canal and lake rates are very low, $1.50 to Albany, $2 to New York; $1.00 from Toronto, 90 cents from Port Hope and Trenton and 70 cents from Deseronto and Belleville.

1¼, 1½, 2 & thicker uppers	$42 00@44 00
" " " " pickings	32 00@34 00
" " " " cutting up	22 00@24 00
" " " " cutting up peckings	
peckings and better	32 00@34 00
1 inch selected sidings	28 00@30 00
1¼ " " "	30 00@35 00
1 & 1¼ in. box	12 00@14 00
" " sidings, dressing and better	22 00@25 00
1x10 in. 13 ft, dressings and better	20 00@25 00
" " shipping culls	14 00@15 00
" 14 & 16 ft. dressings and better	20 00@23 00
1x10 in. 14 & 16 ft. ship culls	14 00@15 00
1x12 " " " "	14 00@15 00
" " " daessings and better	20 00@23 00
1x1¼ in. strips selected	23 00@25 00
" " dressings	16 00@17 00
" " culls	10 00@13 00
Ash.	
1st & 2nd, 1 to 4 inch	18 00@22 00
Culls " "	10 00@12 00
Basswood.	
1st & 2nd, 1 & 1¼ inch	18 00@20 00
Culls " "	10 00@11 00
Shingles.	
XXX Pine	3 50@ 4 25
XX "	1 90@ 2 10
XXX Cedar	2 90@ 3 25
XX "	1 50@ 2 00
Lath 1¼ No. 1	2 00@ 2 25
" No. 2	1 50@ 0 00

BOSTON.

Cotton, Wool and Iron of July 1, says:—Trade is moving along very quietly, with a limited call for general supplies. Spruce is rather easier. Hemlock boards are in good supply. Yellow pine remains very dull. Hardwoods are in fair request and are steadily held for good selections.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@25 00
Culls	12 00@14 00

TONAWANDA.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

LONDON.

The *Timber Trades Journal* of June 28, says:—Steamers from Quebec with whole or part cargoes have been pretty numerous to the Thames the last fortnight, and prominent amongst those recently arrived are the Romeo, the Malabar and the Tantallon. The first-named brought an entire spruce cargo amounting to

something like 780 standards, which formed quite a mountain of wood on the dock quay in the Albion Dock, alongside which this huge vessel discharged. These deals are mostly 1sts and 2nds of a well-known Quebec shipment, and looked a very clean and well-assorted cargo. A considerable portion has been already piled, and its merits can, therefore, be better seen than while heaped promiscuously on the quay-side. The Malabar brought only a portion of her cargo of deals, but it was a tolerably large part, and being some 330 standards, would go far to fill up one of the ordinary sailing vessels that cross the Atlantic. It would take a five hundred ton ship to carry it anyway. These goods, a nice assortment of Gilmour's pine, are piled at Cross Bank, Centre Yard, having been lightered into the Surrey Commercial Docks as the steamer discharged her deals overside in the river. The steamer Tantallon the most recent of the arrivals, brings an entire cargo about the size of the Romeo's, which she was delivering overside into the lighters out in midstream in Canada Dock, her cargo consisting of 580 standards of Montmorency pine, and some 200 standards of Breaksey's spruce, so that we have with these steamers and others previously mentioned in the *Journal*, partly or wholly laden, something like 4,000 standards of Quebec pine and spruce delivered in the docks within six weeks of the St. Lawrence being open for navigation; a biggish contribution so early in the season to receive from the other side the Atlantic, and quite a month earlier than we used to get fresh goods prior to the adoption of steamers in the pine trade.

The readiness of steamship owners to adapt themselves to the trade, by loading up for two or more consignees, no doubt induces many to keep in the import trade who, were they obliged to charter the whole vessel, would rather supply themselves at the public sales, even at some disadvantage, than risk an over-stock.

We expect, however, the freight would be somewhat tighter for calling at two places than if the vessel were taken up to load at one port solely.

The general tendency has been one steady decline. Of course there will be the better descriptions of Cronstadt and White Sea goods to come on the market yet, but there is nothing to found any hopes on of the market taking a favorable turn just yet, at least such are the conclusions naturally to be drawn from the result of recent sales.

The arrivals into London this week amount a total of 55 vessels, against 73 that came forward this time last year. Of this week's number 35 are steamers and 20 sailing ships, so that the bulk of the Baltic trade is still in the hands of the former, which seem likely to do a biggish share of the Colonial trade as well. Sweden is the largest contributor of course, but if the limitations expected by the shippers are to be fulfilled we might see a marked falling off by and by.

LIVERPOOL.

The *Timber Trades Journal* of June 28, says: During the past few days a larger number of vessels laden with timber and deal cargoes have arrived than has been the case for some time past, and as these are pressed upon the market prices especially for spruce deals are weak. In other woods there is no change in quotations.

The directors of the Lancashire and Yorkshire Railway have issued a notice inviting tenders for the erection of buildings to include an hotel, shops, and offices in front of their new Exchange Station. Tenders are to be lodged by 21st July. It is reported that the new plans show the proposed building will be upon a very extensive scale, and furnish employment for a large number of hands whilst they are in progress. The reconstruction of several stations on the Liverpool and Southport branch of the same system is also in contemplation when the work of doubling the line is completed, and which is now being pushed forward with great vigour.

With regard to further dock improvements and accommodation, the Works Committee of the Mersey Dock and Harbor Board intend to submit the following recommendation at the general meeting of the Board this week: "To lower the foreshore or river bed, in the vicinity of the entrances to the Herculaneum system of docks, and to construct sluices in the river wall abreast of these docks, with a timber lie-by in connection therewith, at an estimated cost of £58,000." This will assist in livening up trade at the south end of the port, which needs a stimulus.

GLASGOW.

The *Timber Trades Journal* of June 28, says: The arrivals at Glasgow for the past week have been very light, consisting of small parcels of staves and planks, &c., per steam liner. The imports at Greenock are a large cargo of pitch pine; there also has just arrived there, though not in time to be particularized in this week's import list, the first sailing ship this season from Quebec, after a passage of 42 days. She is a vessel of about 800 tons, and the cargo was loaded at the close of last year, but when about to sail for the Clyde the ship was caught in the ice, and had to winter in the St. Lawrence. There has been a large import for the past week of north of Europe wood goods at Grangemouth, thirteen vessels being employed, giving an aggregate tonnage of 4,040, the cargoes consisting of deals and battens principally.

The arrivals at Grangemouth since the beginning of the year are represented by a carrying tonnage of 15,000 tons, as against 10,000 tons in 1883 at corresponding date, and 19,000 tons in 1882.

As regards imports from Quebec to Clyde, the spring fleet is likely, from all reports, to be less than usual, which will be in keeping with prospective trade, or probable wants; for, although large quanties of Canadian timber, part without reserve, have gone lately into the hands of dealers and consumers at sales, there is still a considerable stock on hand, particulars of which will be shown in the comparative statement to be made up in a few days.

At Glasgow the market is fairly well supplied with walnut, whitewood and birch, but anything like a brisk demand for wood is not likely to spring up until our summer holidays are over.

There has been a falling off in the deliveries of deals lately from Yorkhill Yards, Glasgow, the following being the figures compared with previous years:—

	1884.	*1883.*
	pcs.	*pcs.*
May	52,358	61,446
June	51,448	63,000

There are no auction sales to report since last writing.

TYNE.

The *Timber Trades Journal* of June 28 says: The importation of the past fourteen days has been very large, and covers almost all kinds of wood goods. Staves and pit-props form, as your readers will see, a large item, and sawn goods from the Baltic are also a very important amount.

One very gratifying feature of this year's importation is the uniformly good condition of the goods coming forward. So far as we are aware there have been no cases to the Tyne of discoloured or damaged goods, and certainly all yet delivered will, from their bright appearance and uniformly good quality, bear credit to the Swedish shippers. Stocks of sawn goods goods have not to all appearances in the docks grown much larger, the greater part of the spring arrivals having gone direct into consumption. Of other goods, pit-props and mining timber are very much too large, and were another prop not imported this season it would scarcely cause much inconvenience, except, perhaps, for some special lengths.

In American goods stocks are still very large, and the demand absolutely nowhere. Perhaps this applies more especially to yellow pine log timber, of which the stock is high. Pitch pine is selling at very unremunerative rates; yellow pine deals are the only goods of which stocks are small and inquiries abundant. It is, perhaps, difficult to predict the course of events for the next few months, but it is not likely that the demand will improve during the summer.

This being the race week at Newcastle, business is entirely at a standstill from Tuesday morning till the end of the week, the opportunity being usually taken advantage of to do all the necessary repairs in the various manufactories.

J. S. MAYO

IMPORTER AND MANUFACTURER OF

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As I carry the LARGEST and BEST assorted Stock of OILS in the Dominion, I am prepared to fill all orders Promptly and at

LOWEST MARKET PRICES.

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GROWING LUMBER TOWNS

Menomiee, Mich., and Marinette, Wis., occuping opposite banks of Menominee river at its mouth, are rapidly growing. A census has just been taken, which shows that Menominee has a population of six thousand, and Marinette, and Menekaunee, the latter a sort of tender to Marinette, having seven thousand resident people. These places owe their growth and importance to the immense lumber industry that centres at that point. A new start has been given to these places by the building of the Milwaukee and Northern (Wisconsin and Michigan) branch, which gives them two important railroad outlets southward and westward. Now another impetus to growth has been given by the certainty that the St. Paul and Eastern Grand Trunk is to be built to the mouth of the Menominee. Not only so, but the probability is that Menominee and Marinette will have additional connections with the Lake Superior region through the further extension of the Milwaukee and Northern, and probably in the near future connections with the Northern Pacific system and the Minneapolis, Sault Ste. Marie and Atlantic railroads, thus affording Menominee a range of the entire Lake Superior country, and northern outlets east and west. With all these railroad advantages added to lake commercial facilities, Menominee and Marinette combined should constitute the leading center of the shore country north of Milwaukee, in population and general importance.

A Courageous Proposal.

The *Monetary Times* of July 11, says:—A Duluth, Minn., despatch dated July 6th, states that the lumbermen of the northwest are considering a proposition to shut down all mills on Sept. 1st for the remainder of the year. They say that at present prices it is impossible for lumbermen to make anything, and that some such movement as this is not only needed, but demanded, to restore prices. The proposition has been talked of by lumbermen all over the northwest, and if agreed upon all the manufacturers will go into it.

The Late Senator Skead.

The *Monetary Times* in the obituary of the late Senator Skead says:—Senator Skead formerly carried on a large lumbering business, on the upper Ottawa, in which he was, like so many others, ultimately unsuccessful. He was honourable and energetic in his dealings, and his death will be regretted by a large circle of friends.

Bankers' Association.

The Annual convention of the American Bankers' Association, will be held at Saratoga, N. Y., on August 13th and 14th. Its deliberations this year, it is stated, will be of special interest. Each bank in the United States is entitled to send one delegate.

RESPECT OLD AGE.—An old favorite is the remedy known as Dr. Fowler's Extract of Wild Strawberry. Thirty years reliable for cholera morbus, diarrhœa and summer complaints.

THE CANADIAN TREATY.

The proposition to restore the reciprocity treaty of 1854 between the United States and Canada has received the quietus for the present year. The sub-committee of the House committee on Foreign affairs has reported against it. The resolution which was referred to the committee specifically directed that inquiry be made as to the policy of renewing the abrogated treaty, giving the committee no further power.

The sub-committee that was charged with the actual inquiry arrives at the conclusion that it is undesirable to renew the treaty, and gives as a reason therefor the same that caused its abrogation—that is, because it was inequitable in its operation toward the United States. Stripped of the circumlocutory verbiage of the committee's report, the reason is simply this: Canada has any amount of cheap lumber and timber to sell in this country, and therefore wants a recipocity treaty, the United States have little to sell in Canada, and for that reason could secure little advantage from a treaty. This is the argument of the opponents of the international measure. The committee, however, overlooks the fact that the manufacturers of the Northwest would gain a great advantage by being able to ship lumber, agricultural machines, wagons, etc., into the new Northwest of Canada. A reciprocity treaty would without doubt benefit the communities on both sides of the line west of the great lakes, while it would be of more doubtful policy in the East. This is another pointer to the future probability that the Canadian and American Northwests will seek to be united under one commercial relationship, if not under one flag.

The committee finished its report by recommending that the old treaty be not re-enacted, but suggested, instead, a "commercial union," whatever that may mean, between the two countries. There is no probability that the House committee will adopt the report of the sub-committee at this session, much less enter upon the consideration of its suggestion. The matter is laid by for the present.—*Northwest Lumberman.*

Collision of the Alberta.

WINNIPEG, July 10.—The C.P.R. Steamer Alberta on her up trip collided with the steam barge Pacific at the foot of Neebish Rapids. Both vessels were considerably damaged, notwithstanding which the Alberta continued her journey and arrived at Port Arthur to-day, with her port bow stove in and other injuries. She had 200 passengers and 800 tons of freight.—*Globe.*

Port Arthur.

Tenders for constructing a brakewater to protect the harbor at Port Arthur, the present eastern terminus of the Canadian Pacific railroad on Lake Superior, have been advertised for. This is considered equivalent to fixing the fact that Port Arthur is to be the permanent Lake Superior port of the Canada Pacific system.

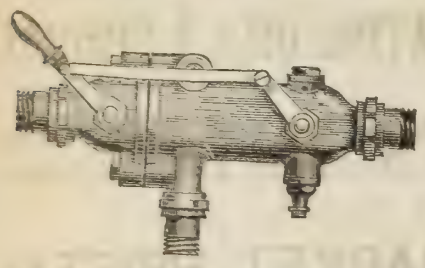
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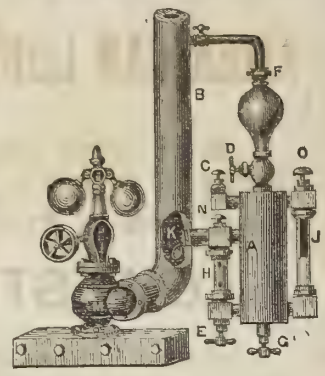
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Will lift 20 feet, and take water at 150 degrees. Only one handle to start and stop. No valve to regulate. CHEAPER than any other Injector in the market. Also, PATENT EJECTORS for conveying Water or Liquids. CIRCULARS ON APPLICATION.

The Continuous Feed Lubricator Saves 50 per Cent in Oil.



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SAW MILL DOGS

The Sawyer's Favorite

For Holding Logs upon a Saw Mill Carriage while being Sawn into Lumber.

MISSISSIPPI, June 7th, 1883.

HUGH GIBSON, ESQ.,—Your Patent Excelsior Mill Dogs give entire satisfaction, and is certainly up to your recommendation. They are the best Mill Dog in the market. I am very much pleased with them.

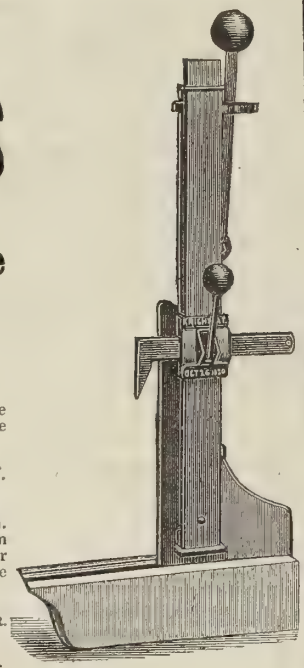
Yours Respectfully,
PETER McLAREN.

BERKLEY, April 20th, 1883.

HUGH GIBSON,—SIR.—The Dogs I bought of you give satisfaction. They beat any Dog that I ever saw for ripping or edging lumber on carriages. They are just the thing for scantling. I would not take $50 for them to-day and have to wait for another pair to come from you, because I believe they make two dollars a day for me.

Yours truly,
GEO. S. BROWN, JR.

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STEAM ENGINES, STEAM PUMPS, STEAM BOILERS, SAW MILL MACHINERY,

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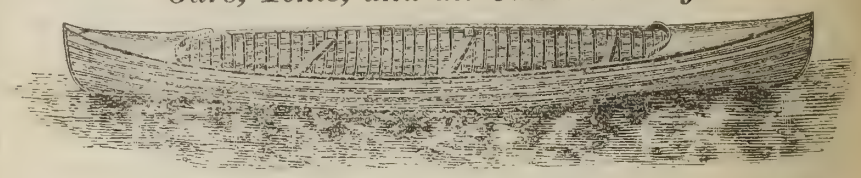
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CANOES

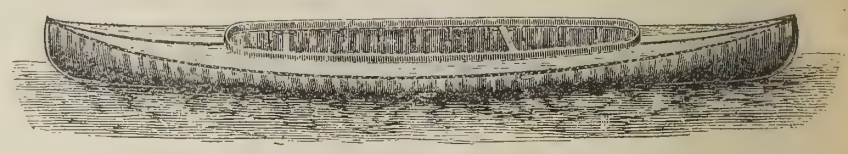
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THE ONTARIO CANOE.



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Gold Medal, London Fisheries Exhibition, 1883.

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Canoes for Lumbermen, designed to carry any amount of goods and chattels and strongly built, made to order on short notice.

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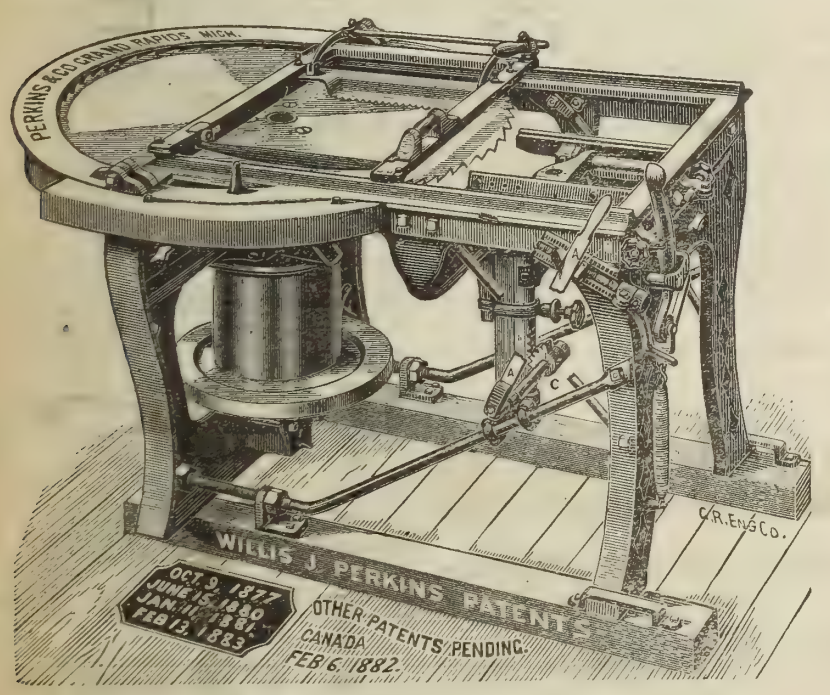
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We wish to call the attention of our Canadian Lumbermen to our First Class HEAVY SAW MILL MACHINERY for Circular Mills and Circular and Gang Mills of the most improved designs. We are prepared to submit Plans and Specifications, together with any information that our many years of close application to the Saw Mill Business may have suggested to us, also when required to enter into contract for building and supplying the machinery complete, superintending the starting of the same, and handing over the mill to its owner in first-class running order.

Besides the variety of Machines we build for the manufacture of lumber we have added to our list the

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GRAND TRIUMPH.

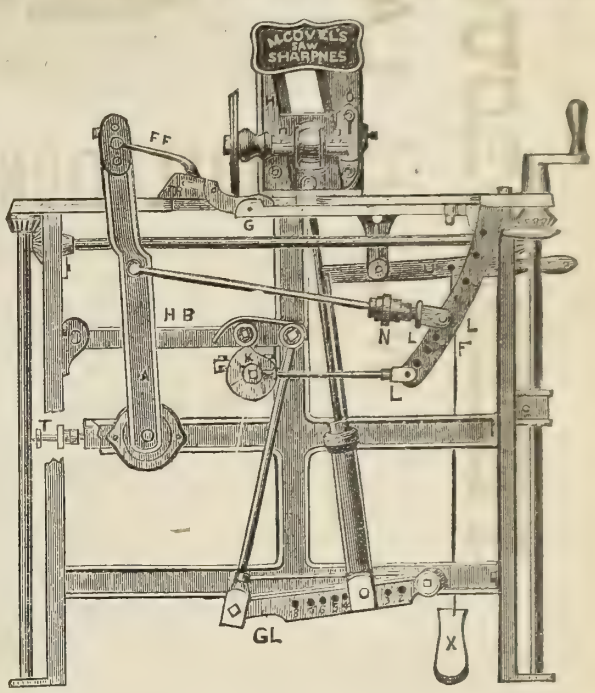
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The only Horizontal Saw Machine on which a thick slab can be cut from the bolt.

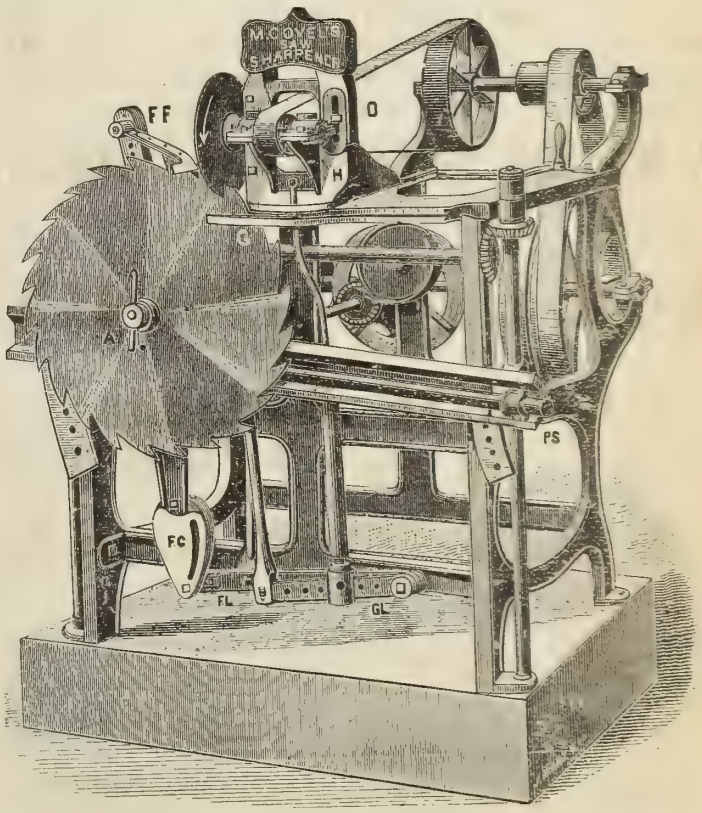
SECOND CUT ALWAYS A SHINGLE.

Knots, rots, hearts, bolt squared rift-ways, and all irregularities cut off at one clip. This improvement will pay the price of the whole machine every season by increase of quality and quantity cut

THE M. OVEL PATENT SAW SHARPENER.



The above Cut No. 1 shows some very important changes that have lately been made, which makes the machines far less complicated for new beginners to operate. Cut No. 2 shows this machine with a circular saw upon it ready for operation.



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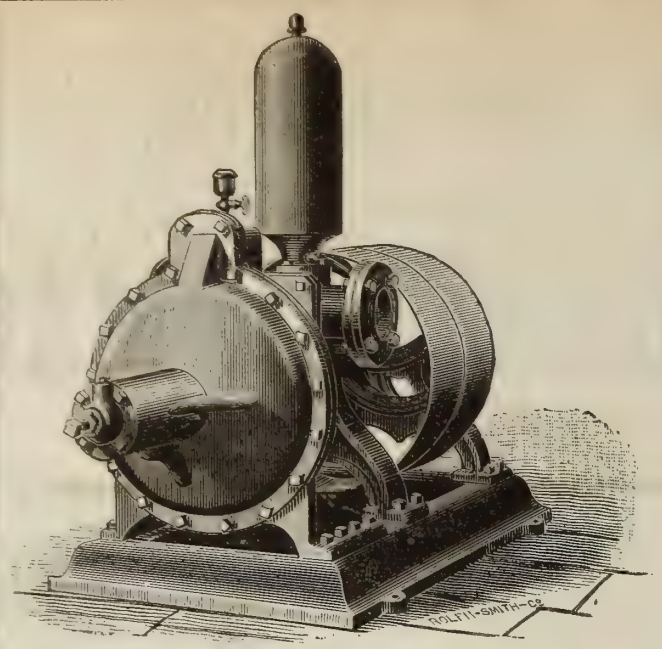
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No.	Diameter of Pipes.		No. of Revolutions.	Capacity per minute at table speed.	Price.
	Suction.	Discharge.			
2	2½ in.	2 inch.	250	125	$100
3	4 "	3 "	250	250	150
4	5 "	4 "	250	400	225

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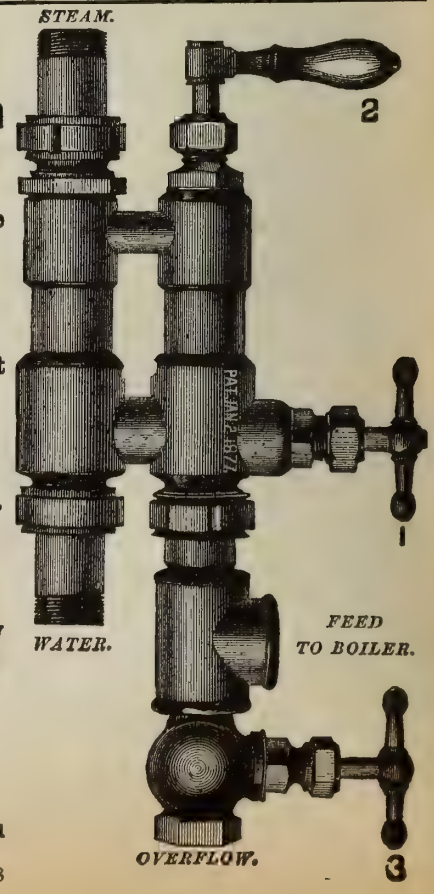
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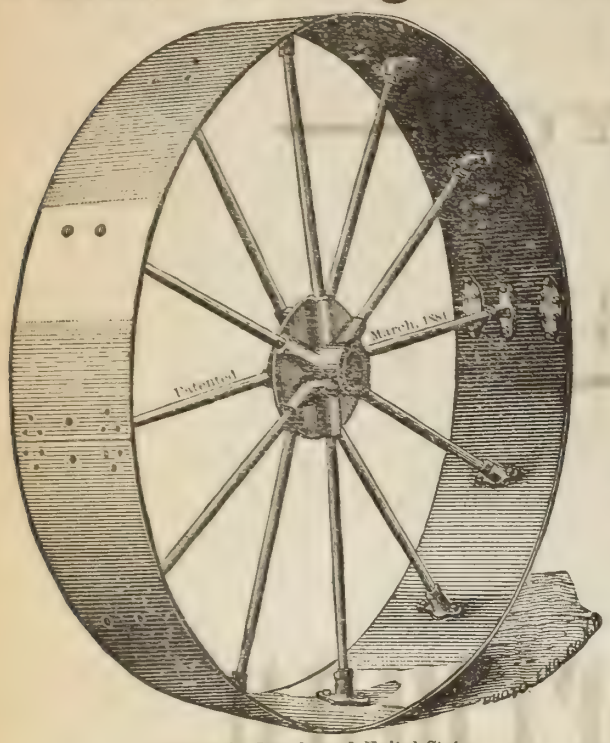
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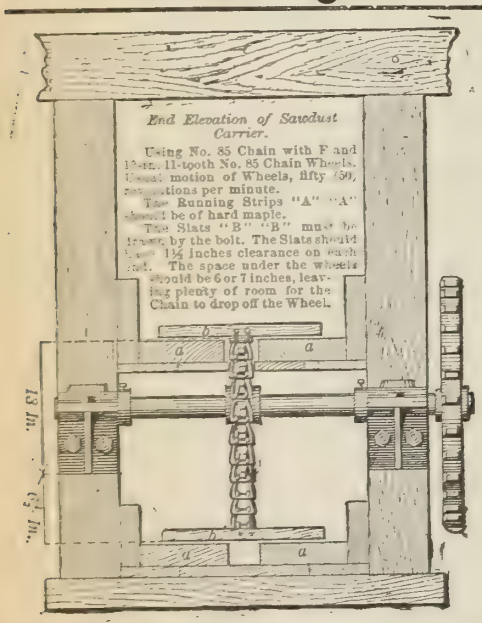
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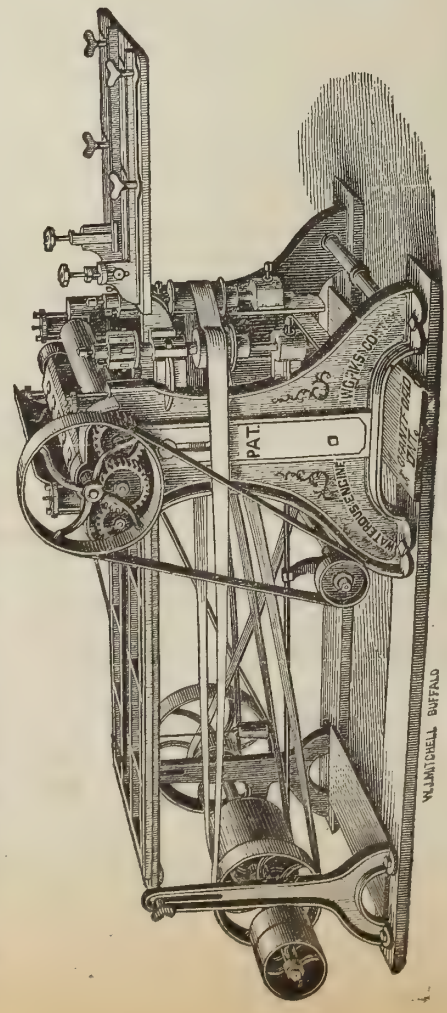
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52	"	20	"	"	6	"	73	" 20 " " 8 "	
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VOL. 4. PETERBOROUGH, ONT., AUGUST 1, 1884. NO. 15.

METHODS OF SAWING TO OBVIATE THE EFFECTS OF SHRINKAGE.

Written for the Canada Lumberman.

Having shown in our previous communication the peculiar action of shrinkage in lumber seasoning; that it is a drawing together of the wood fibres, around the tree, or circumferentially, not radially, and as a consequence boards having the heart at one edge do not shrink in their widths to any appreciable degree, neither do they warp or twist, while boards cut at right angles to this direction or from the side of the log do all their shrinking in the direction of their width, and, unless prevented by mechanical means, invariably warp.

The former, or radial sawing, is technically called rift sawing. The latter, bastard sawing. What is called quarter sawing in New York market reports, in reference to oak flooring, is when the log is first quartered and then the boards sawed alternately from each side of the qnarter, the nearest practicable method to true rift sawing.

The question now for consideration is: How to saw the logs in order to obtain the greatest number of boards in or approaching the radial direction. By the usual course of siding down and sawing up stock our boards are generally the reverse of this, or, as shingle makers would say, they are cut bastard. One or two boards in the centre of the stock are radial, but these bring only about 10 in. wide, and have heart in the middle, which is generally a blemish, practically leaves the whole product of the log bastard cut. If this is for rough lumber such as for barn building, sheds, packing boxes, or fencing, where we simply want the highest average widths the log will make, regardless of shrinking or warping, we have attained our object; the log is best sawn to suit the purpose; but if it is for house finishing, for which most of our good lumber is sawn, we have missed our aim. How then shall we secure it? We answer, by directly reversing the usual course in sawing: Instead of leaving as we do a 10 in. stock in the middle of the log when slabbing, suppose that we set our slabbing gang to cut three or four boards out of the middle of the log, leaving two five in. slabbed cants on each side. From the boards which are the widest the log could make we have the best possible cut up lumber for any purpose. The cants can be laid one above the other and run through the ordinary stock gang; or what would be better, to run them through a short stroke, quick revolting gang, specially constructed for that purpose. The saws need not be more than 18 gauge. From these cants we obtain the best flooring and house facings that can possibly be made from the log. By this method no true bastard boards are made, we have sawed from the centre not from the outside. The cut has been principally radial or rift instead of being principally bastard. The shrinking, warping tendency is almost wholly disposed of, instead of being cut to allow its greatest action. The cost of production may be slightly increased, but the value of the product is much more increased.

Besides this greatly diminished tendency to warp and shrink the lumber will wear much better, or if painted and subjected to wear, or to wet dry conditions, it will retain the paint much longer. Let the reader examine any well worn floor, whether painted or bare, he will find the bastard sawn board worn down, while the radial or quarter sawed boards are high; and if he chooses to carefully observe the wearing action he will find that the continual beating of the wood by the boot heels loosens the fibre, separates the annual growths from one another, particularly where they lie flat or nearly so, to rise up and peel off. On the quarter sawed boards, where the grain of the wood is on edge, the beating action is not nearly so effective, slivers do not rise. I have seen kitchen floors that were generally good, but having a few bastard boards with the heart side up, which is the worst of all positions, for wear; I have seen them from one-half to three-quarters of an inch below the general level of the floor, with the peeling and slivering process continually going on. Painting would stop it just for a short time, then it would begin to rise up in larger patches than before making in the eyes of the tidy housewife a most abominable annoyance. I have known them to make the remark, "I wish all the boards in the floor were like those," refering to some that were quarter sawed, which retained their tight joints and smooth surfaces. If the women all fully understood the points I am now making they would besiege the architect in a body and insist that he place in the specifications for all decent houses: ALL THE FLOORING TO BE QUARTER SAWED. There is nothing impracticable in this, lumber can be readily manufactured as I have described: Let logs of suitable quality and size be selected and boomed separately, then set the gangs as I have pointed out. The output may not be so large, but it would be of much greater value, and if it should fail to bring a corresponding price it will be simply because the purchasers are not yet posted as to its merits.

I have indicated pretty clearly how this rift sawed lumber can be made in gang mills. In circular mills it is not always so easily done. Ripping off heavy cants and afterwards loading them on the carriage, to be resawn into flooring, though quite practicable, is not so convenient. Besides it requires a large saw, which means a heavy gauge, with consequent waste of material to rip up large logs and saw boards out of their centre. If a top saw is employed in the usual way the situation is scarcely improved as the two cuts seldom match, the portion cut by the top saw generally requires to be edged off. But with a new improvement, which I have now ready for the mill men the top saw is *compelled* to follow the cut of the lower saw, not only when it runs true, but when it deviates as it frequently does in a moderate degree. With this arrangement we can make a large reduction in the diameter of the principal saw, with a very pleasant reduction in first cost, and, of course, a considerable reduction of gauge: sufficient to obtain by the saving of material a respectable percentage of profit on the whole manufacture. If the plan of resawing the cants into flooring on the circular is considered too laborious there is another alternative: a small circular gang can be placed in the edger, if it possesses the necessary power and feed regulation, &c., &c., cants can be nicely sawed in flooring boards in it. This is no experiment. The Filer & Stowell Co., of this city, whom I have the honor to serve, make the edger which performs the duty.

Of course this method of sawing only approximates true radial or rift sawing, which is for boards of parallel section impracticable.

The other method referred to at the beginning of this article called quarter sawing is also only an approximation. By this the log is first quartered, then each quarter is taken separately and sawed up, by cutting boards alternately from each of the flat faces till only a small triangular slab is left. To do this economically requires a special machine. Quarter sawed oak flooring in New York market is quoted about 30 per cent. higher than plain sawed.

For one particular purpose true radial or rift sawing is employed with excellent effect that is in making clapboards or house siding, principally for eastern markets. The original method of making these is by mounting a log four or six feet long, in centres, on a carriage which is made to travel against a thin circular saw which makes its cut directly towards but not not quite to the centre. The log is then gigged and revolved for the thickness of another clapboard which is similarly cut, and the process continued until cuts are made all around the log, the board being held by the thin edge at the centre. They are then pulled apart edged and dried and afterwards planed, trimmed and bundled for the market, where they always bring prices greatly in advance of other siding, the style of sawing alone making the difference.

A lumber firm in Manistee, Michigan, H. Eaber & Sons, have been manufacturing this siding by an improved process, having a well designed special machine for the purpose, on which they hold patents in the United States and Canada. There are other firms in the same place also engaged in it. Mr. Albert Cunningham of this city also holds patents and is interested in this class of machinery, and I understand they are arranging with the Wm. Hamilton Manufacturing Company to manufacture under their Canadian patents. As is usually the case the inventor not only supplies a manifest necessity, but leads out and anticipates the coming want and prepares to meet it, and our progressive trade journals like the CANADA LUMBERMAN announce his improvements and educate the public mind in the onward march of progress.

It is within the memory of young men when the wants of our country were supplied by the mills at the rate of one or two thousand feet per day. Now it is not uncommon to find single circular mills averaging 40 or 50 thousand per day. The progress has been nearly all in the direction of speed, and no doubt we have nearly reached the limit, and, seeing the way our growing timber vanishes, it is high time we paused and considered the question of economy of timber, as well as economy of time. The problem we now have to solve is to make first class timber out of second class logs, and to make more of it than has been heretofore made. The good lumber is often there if we only take the neat and skillful way of getting out. Our methods of bastard sawing gives us the knots through all the boards. By the methods we have pointed out it is possible to get considerable good lumber between the knots; but if we cannot escape knots we can get rid of the shrinking, warping and splitting tendency which is an immense gain. Good lumber is still in good demand, it is the common grades that are flat. The object of these articles is to show how the quality may be improved, simply by a change in sawing processes. We think this is accomplished, and should be glad to hear that some of our mill men have made of it a practical demonstration.

W. H. TROUT.

Milwaukee, Wis. July 19th, 1884.

The Forestry Exhibition.

In its first notice of the International Forestry Exhibition, Edinburgh, the *Timber Trades Journal* says of the show of New Brunswick timber:—We are sorry we cannot congratulate the Government of New Brunswick on having sent a representative display, and it is much to be regretted if any false notion of economy has prevented them from voting the necessary funds to have their great forest treasures adequately shown at this important exhibition. From a chat with Mr. E. Jack, in charge of this exhibit, we gathered that the supply of 1st quality pine in New Brunswick is now very limited, and it is on the hardwoods, such as birch, beech, maple and ash, that his company chiefly rely. We saw some very handsome specimens of these woods, in which there ought to be a larger trade done with this country.

Good Work.

The Ontario Lumber Co's. mill, of Midland, cut in June 1884.—24 days work,—5,520 logs, making 938,625 feet of lumber and scantling, all made with one circular saw. Also 370,000 pieces of lath.—*Midland Free Press.*

RAILWAY TIES.

There are now fully 148,000 miles of railroad track in the United States, and therefore about 391,000,000 ties, and the average consumption for renewals should be about 56,000,000, or the product of 560,000 acres of land, at 100 ties per acre, requiring 126,800,000 acres equal to 26,000 square miles, equal to less than half the area of North Carolina, if, as reported, it takes 30 years to grow tie timber.

Mr. Hicks says that the reports to the Forestry Department show that it takes an average of thirty years to grow timber large enough for ties, and that the product is about 100 ties per acre, while the average cost of ties to the railroads is 35 cents. This is a product worth $35, as the return of an acre for 30 years. If this is all, then with money at 5 per cent. no cost of cultivation and no taxes, it will pay to grow ties on land already wooded worth $8 per acre, and on land worth $7 per acre if interest is $6 per cent.

If 113.3 acres of woodland are required to maintain the ties of every mile of railroad, the question with the railroads, says the *Railroad Gazette*, is not simply whether they should produce their own ties, but also whether they may not profitably diminish their consumption. The experience of Germany indicates that an average life nearly three times as long can be had by preserving the ties with chloride of zinc, or crosoting (so called for there is usually little or no creosote in the oil used). But even if the product of 56 acres per mile is required, it does not follow that the only escape from a famine will be the cultivation of timber. If land planted or stocked naturally with trees which will make 100 ties in thirty years is worth $20 an acre—and in many parts of the country it is worth as much as that—at the end of the thirty years required to grow the trees it will represent with interest at six per cent., $118, and with interest at five per cent., $88; and if then the land after the ties are cut is still worth $20 an acre, the $100 ties, before cutting, will have cost $98 in the one case and $68 in the other. But the taxes meanwhile would probably have cost $50 or $60 more, and there would be some expenditure for care. If then the land is not cheaper than $20 per acre, the railroad will probably do better to depend upon some metallic substitute than to grow tie timber, even if it gets 14 years' life out of a tie.

THE TANITE CO.

The dull times and blue outlook have not lessened the activity of this substantial concern. The recent visit to Europe of Mr. T. Dunkin Paret, the President of the Company, completd arrangements by which its European trade will be doubled during the coming year, and shortly after be quadrupled. In view of this fact, and of the successful business transacted this year, (which most manufacturers have found a bad one) the Company is now arranginging for a large extension of its factory. This factory was started in the year 1867 by the erection of a stone building 45 feet long and 32 feet wide, two story and attic, with boiler shed extension. The total floor room of the original buildings amounted to 5,550 square feet. The flooring used at the present time is 34,190 square feet. The new buildings, for which preparations are now making, will be an extension of, and the same size as, the original stone building. It will be a substantial structure of stone, supported by heavy iron arches which are to span the wheel pit and overflow.

In order to extend and more thoroughly control the water power, and to secure timber and stone for further operations, the Company bought during last month from Mr. Robert Huston his farm of 130 acres which adjoined the Company's original property. The total amount of land now connected with The Tanite Factory is about 180 acres, and the Pocono creek flows through it for the distance of about one and three quarter miles.

On the property recently purchased the Company is now cutting timber for the preliminary work connected with the improvement of its water power. A new brest work, cribbing, and flumes are to be erected at the dam, and new Fore-bay and Penstock at the factory. This latter is to be larger and more substantial than the present one; the heavier, or corner and sill timbers, being 14x16 white oak. At present the factory has, in addition to its steam power, a 42 inch Jonval Turbine; but, in the new Penstock, a 24 inch Stevenson Duplex Turbine will be added, and by means of these three motors the various departments can be run independently when desired.

During the last summer the Company put in operation a complete fire system. Iron pipes are laid under ground all around the buildings, and are connected with three pumps situated in different buildings, one detached; one double acting Worthington Steam Pump, one Niagara Steam Pump, and one powerful Pump run by by Water Power. Five Plug or Hose houses stand scattered around at a safe distance from the buildings, containing in all twelve plugs or nozzles, and 650 feet of 1½ inch, and 200 feet of 2 inch hosc. Fire-axes are in all these houses, and fire-pails and axes liberally distributed through the buildings. Streams of water have been thrown upon the buildings in one minute and twenty seconds after the first signal was given.

For the benefit of such readers as may not have seen any previous notice of The Tanite Co., we will say that it manufactures Solid Emery Wheels and the varied machines with which such wheels are applied, and that its goods are shipped to all parts of the world. It has agencies in all the principal cities of the United States, and also in Canada, Australia, and France, besides sub-agencies in many European and other countries.—*Stroudsburg, (Pa.,) Jeffersonian.*

ARRIVALS IN ENGLAND.

The timber ship arrivals between the 2nd of July and the 9th inclusive comprised 100 bar one, of which 50 are sailers and 49 steamers. There are 13 arrivals from Quebec, altogether from the St. Lawrence ports 22, a good instalment of the spring fleet, and much in excess of last year at the same date, when there was a pretty full list of 77 vessels one with another. While our imports are falling off in other produce, timber seems to come forward with all the energy of an impatient market, one reason for which is, no doubt, that, as it is not a perishable article, the time to bring it forward is while freights are low, and it will be sure to be wanted some time or other, perhaps at a better price than can be got for it now.

We note that out of the largest fleet of vessels arriving from the St. Lawrence the first four sailing vessels to enter the port of London from Quebec were for Messrs. Bryant, Powis, & Bryant. Of these, we understand, the Komandor Svend Foyn has gone into the Millwall Docks to discharge, so that with this company will rest the credit of having unloaded the largest cargo imported during the season. We believe the 1,100 standards this ship delivers will not be equalled unless one of the big steam liners loads up a full and comple cargo of wood. The Deepdale, that came the year before last from Pascagoula, with 990 standards on board, was the next largest to the sailing ship above mentioned.—*Timber Trades Journal.*

A STRONG MONEY BOX.

Mr. William H. Vanderbilt's treasure vault, in which it is said he recently stowed away some $100,000,000 in securities, is one of the most redoubtable works of defence on the American continent, though you may not be entirely certain of that by surveying his mansion from the outside. Its foundations were blasted out of the rock; the front wall is 5 ft. in thickness, and the side and rear walls 3 ft., the material used being pressed brick with brown stone trimmings. The beams, girders, and main pillars are iron, incased in fire proof material. The doors, window frames, and minor partitions are iron, marble, and glass. No wood is to be found in the structure. The great vault is 36x42 ft., of wrought iron, steel, and Franklinite iron, is imposing in strength and proportions, and is situated on the ground floor. Its four outer doors weigh 8,200 pounds each, and have every effective and known improvement in defensive devices. A massive wall of masonry surrounds the iron work. A vault, which is burglar, fire and water proof, constitutes a distinct building in itself.—*Scientific American.*

BOBBIN HEADS MADE FROM PULP.

A new industry has been established in Oxford county by Prescott & Forbes who have leased the mill and power at Snow's Falls, Paris, and commenced the manufacture of bobbin heads from pulp. It is claimed these goods are superior to wood, as they do not warp, crack, or sliver by use. The power at Snow's Falls is a safe and reliable one, there being a direct fall of forty feet to the two turbines. Prescott & Forbes manufacture the pulp, which is converted into bobbins and spool heads. Poplar slabs are placed in a press which forces them upon revolving emery wheels. The wood is ground into a fine powder, which is washed off through tubes by a constantly flowing stream of water. By draining and evaporation, the moisture is partially extracted. The pulp is then placed in a large tank or vat and still further dried. It then passes to a cylindrical hydraulic press. A certain amount of pulp is allowed to enter this press, then a wire screen is admitted, then more pulp and another screen, and so on till a press is full. Then pressure is applied until the whole mass is hard and unyielding. This extracts most of the remaining moisture. When this press is opened, the pulp comes out in discs about two feet in diameter and nearly an inch in thickness. These discs are again subjected to pressure and dried in a dry house until "bone dry." They are then tempered with water until suitable for cutting. Next they are passed to a cutter where dies stamp out the bobbin heads, as soles are cut out in a shoe shop. The heads are about five and one-quarter inches in diameter, and one-fourth of an inch thick, with an inch hole in the centre. After being thus cut out, they are again subjected to pressure in a press which is heated by steam so that they are compressed and dried at one operation. In this condition they are shipped to the manufacturers of bobbins, who place them on spindles, turn them to uniform size and finish them with shellac or paint.—*Main Industrial Record.*

A NEW USE FOR ROSIN.

Mr. S. M. Thomas, of Laurinburg, N. C., has written to the Asheville *Citizen*, concerning the best way to improve the country roads in Buncombe. The suggestion merits attention and seems to be a good one. It is to get a charter, from a joint stock company and during the summer, grade the main roads leading into Ashville, making them 16 feet wide and 10 inches higher in the centre than on the edges, and "when the roads are solid and dry put one barrel of pulverized rosin evenly over 50 yards of the road, which would be 35 barrels per mile; a car load would be sufficient for two miles. The cost of the resin would not exceed $2.25 per weight barrel (280lbs.), delivered at your depot. An application of rosin would be necessary every ten or fifteen years. He says he knows in Richmond county of roads that have not been wet except on the surface in sixteen years. He says: "If the above plan were carried out I am fully satisfied that your roads would be as solid in winter as they are in summer. The streets of your city and the side-walks and private walks could be made solid in the same way.

WHAT IS DISCOUNT.

In answering an inquiry, the New York *Journal of Commerce* says: The word "discount" has almost wholly lost its technical meaning. It was originally used to describe an allowance made for the payment of money before it became due, and in this sense is as much as that money, if put to interest, would gain in the same time and at the same rate. Thus $100 present money will pay a debt of $106 due one year hence, the discount being made at 6 per cent. The disccunt, in this sense, on any sum is less than its interest. Thus the discount on $100 due a year hence, is $6, while the interest is $6,36. But the interest laws of the several States have allowed the banks to deduct the interest instead of the discount, and to pay the borrowed instead of the present worth only the net remainder after such deduction. Thus if a man makes a note for $1,000 twelve months, and gives it to a bank for discount, instead of paying him $943.30, which is a sum that at 6 per cent, would amount to $1,000 in a year, they give him only $940, thus charging him more than 6 per cent. for the sum he receives. In plain terms, they deduct the interest instead of the discount. Out of this has grown the modern use of the word discount, which has simply come to mean a deduction of a given rate per cent. from a given principal. To "discount a note at 6 per cent." is now only to take off 6 per cent. interest. To allow a discount is take off the rate from the face of the sum.

YELLOW PINE.

As a proof of the growing demand there is in the market for the better grades of yellow pine we may mention that the stock in first hands are fetching at the present time really good brands, very fair prices; Quebec 1st bright regulars sells for £24 10s. and best board pine, £30 10s., undersized realising £21 10s. Seconds are also in request, the prices demanded, for 12 and 13 ft. 3x11, being £17 5s., which sellers have no difficulty in obtaining. The pine, ex Lauderdale, in Wednesday's sale, was not by any means a good parcel of 1st dry floated, and fetched very fair prices considering. Quebec freight continue low, and the prospect of their improving is a diminishing one. The same will apply to north of Europe tonnage, which can still be secured at rates that a few seasons back would not have been considered out of the way if reconed by the load instead of the Petersburg standard.—*Timber Trades Journal.*

A New Science.

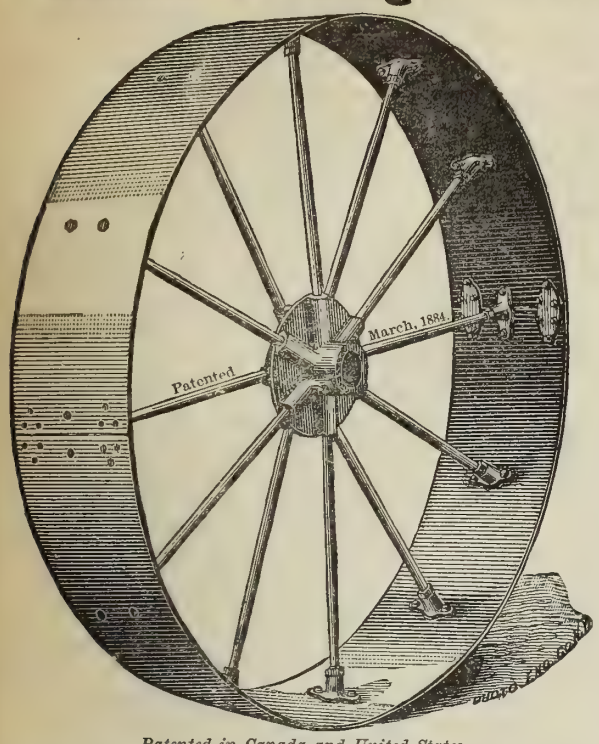
At the London health exhibition Francis Galton has established a laboratory for the "measurement of human faculty." Each visitor will leave a record of name, age, sex, occupation, place of birth, color of hair and eyes, height standing and sitting, weight, length of span of arms, strength of squeeze and pull, swiftness of direct blow, capacity of chest, acuteness of vision, conditions of color, sense and acuteness of hearing, and will take away a duplicate. Mr. Galton regards the art of measuring human faculties as the dawn of a new and interesting science.

LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on July 1st, 1883 and 1884, and also the Consumption for the month of June 1883 and 1884:—

	Stock, July 1st. 1883.	*Stock, July 1st. 1884.*	*Consumption for the month of June, 1883.*	*Consumption for the month of June, 1884.*
Quebec Square Pine	98,000 ft.	401,000 ft.	23,000 ft.	33,000 ft.
" Waney Board	99,000 "	320,000 "		
St. John Pine	8,000 "	22,000 "	00,000 "	19,000 "
Other Ports Pine	26,000 "	62,000 "	18,000 "	2,000 "
Red Pine	11,000 "	67,000 "	1,000 "	1,000 "
Pitch Pine, hewn	571,000 "	472,000 "	90,000 "	278,000 "
" Sawn	724,000 "	590,000 "	140,000 "	183,000 "
Planks	51,000 "	71,000 "	28,000 "	17,000 "
Dantzic, &c., Fir	71,000 "	57,000 "	40,000 "	19,000 "
Sweden and Norway Fir	6,000 "	67,000 "	0,000 "	10,000 "
Oak, Canadian and Amerlean	136,000 "	271,000 "	18,000 "	25,000 "
" Planks	218,000 "	280,000 "	69,000 "	55,000 "
" Baltic	38,000 "	12,000 "	0,000 "	1,000 "
Elm	22,000 "	26,000 "	50,000 "	3,000 "
Ash	0,000 "	17,000 "	0,000 "	4,000 "
Birch	40,000 "	71,000 "	38,000 "	39,000 "
East India Teak	15,000 "	41,000 "	18,000 "	4,000 "
Greenheart	121,000 "	55,000 "	9,000 "	8,000 "
N. B. & N. S. Spruce Deals	11,037 stds.	14,857 stds.	6,569 stds.	7,868 stds.
" Pine	678 "	1,451 "		
Quebec Pine & Spruce Deals	4,628 "	6,415 "	1,893 "	1,910 "
Baltic Red Deals, &c	3,061 "	3,056 "	460 "	1,050 "
Baltic Boards	143 "	40 "	88 "	20 "
" prepared Flooring	5,114 "	3,755 "	1,545 "	808 "

Patent Wrought Iron or Steel Pulleys.



Patented in Canada and United States.

The Perfect Pulley

ANY SIZE FROM

30 in. to 144 in. Diameter.

4 to 48 in. Face.

SINGLE, DOUBLE or TREBLE ARMS.

SPLIT or WHOLE PULLEYS.

Crowning or Flat Face.

Cannot be burst by Speed or crushed by Belt.

LIGHT, STRONG and DURABLE.

Saves Power, Journals & Shafting.

As cheap and cheaper than Cast Iron.

Send for Estimates.

SHAFTING AND HANGERS

Note the following:

90 inch Pulley, 16 inch Face, Weight 615 lbs.
48 " " 20 " " Double Arms 575 lbs.
55½ " " 12 " " Single " 273 lbs.

CHEAPEST, STRONGEST & MOST DESIRABLE PULLEY

ADDRESS:

Waterous Engine Works Co., Brantford.

GANDY PATENT STITCHED Cotton Belting.

BEST

MAIN DRIVER

Practically indestructible under ordinary usage—unaffected by atmospheric changes. Uninjured by water or steam, or heat that would ruin leather or rubber. Stronger than rubber or leather.

Its peculiar adhesive or gripping power on pulleys enables it to be run looser than any other Belt, actual tests proving it to be 40 to 50 per cent BETTER.

ENDLESS BELTS A SPECIALTY.

As Strong at Splice as elsewhere, and as even and smooth. A few of the large sizes lately supplied in Canada:—

Many of the above are endless, and are the second belts to same parties, ordered after thorough trial. Try a GANDY BELT. Address the Sole Canadian Agents,

60	feet,	13	inches	wide,	8	ply.	84	feet, 26 inches wide, 8 ply.	
49	"	18	"	"	8	"	57	" 20 " " 8 "	
49	"	12	"	"	6	"	49	" 11 " " 8 "	
103	"	22	"	"	8	"	47	" 12 " " 6 "	
52	"	20	"	"	6	"	73	" 20 " " 8 "	
101	"	18	"	"	8	"	51	" 16 " " 8 "	
52	"	18	"	"	8	"	37	" 16 " " 8 "	
36	"	12	"	"	8	"			

Waterous Engine Works Co.

BRANTFORD, CANADA.

Ewart Patent Link Belt

Transmits power for slow motions without slipping, stretching, &c.

SPECIALLY ADAPTED

For Live Rolls, Lumber and Cant Transfers.

Sawdust, Slab & Offal Carriers. Log Jacks, Loading Logs lengthwise on cars.

Loading Ties endwise and Telegraph Poles lengthwise on cars, or vice versa on cars or vessels.

USEFUL TO MOVE ALMOST EVERYTHING

If doubtful whether or not it will apply to yovr wants. Send for information giving ull particulars.

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American Saws

SAVE YOUR TIMBER, (making the price of a saw every fifteen days) by using our Thin Saws.

60 INCH DAMASCUS Tempered Saws, 9 and 10 guage, guaranteed at 800 revolutions or less, six to eight inch feed or less.

CLIPPER FLANGE TOOTH SAWS.

LUMBERMAN CLIPPER SAW for thin Inserted Saws.

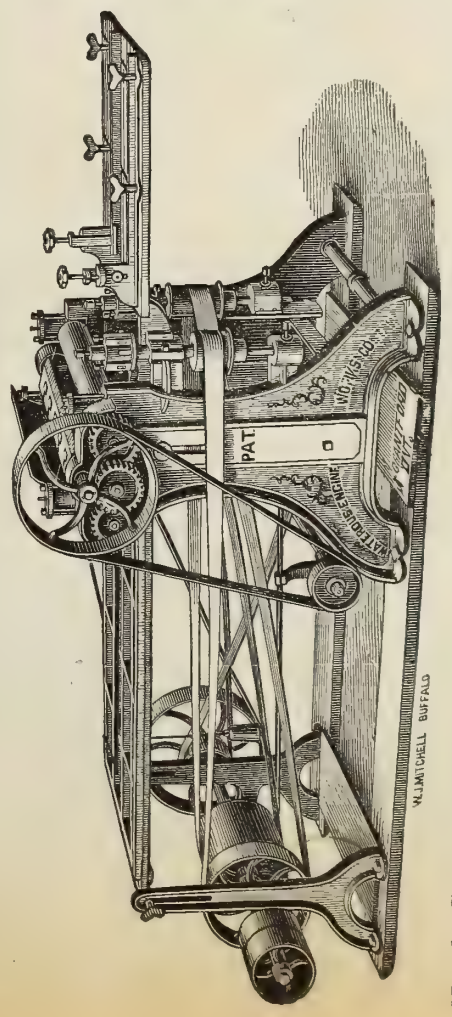
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BROOKE & HOE BIT SAWS.

SWAGES, GUMMERS, CANT-HOOKS, Side Files, Emery Wheels, and all kinds of Saw Mill Furnishings.

Waterous Engine Works Co'y.,
BRANTFORD, CANADA.

The Economist Planer & Matcher (Combined)



No. 1—Surfaces 24 in. wide to 6 in. thick. Planes and Matches 18 in. Wide
No. 2 " 20 " 6 " " 14 "

Strong! Durable! Light! Cheap!

Of the Greatest Capacity and Exceedingly Handy. Send for Circulars, and mention this paper.

The Waterous Engine Works Co.
BRANTFORD CANADA.

PROPOSITION TO CURTAIL THE CUT.

There has been a movement started at Eau Claire with the object of curtailing this year's cut of lumber in the Chippewa Valley, and as much of Wisconsin as possible, by an early shutting down of the mills—say on September 15 or October 1. A meeting of the manufacturers has been held at Eau Claire, at which it was determined to use persuaive means to gather into the movement as large a number of manufacturers as possible. It was decided that if sixty per cent. of the north Wisconsin mills could be embraced in the agreement to shut down early it would be safe to do it. Letters have been sent to Wausau, Stevens Point, Merrill and other points in middle Wisconsin, urging the scheme, and asking for an expression of views. It is held by the prime movers at Eau Claire that a restriction of the season's output of lumber is absolutely necessary in order to prevent an utter collapse of prices, especially in common stock.

The movement also contemplates a wider reach than Wisconsin. Prominent manufacturers in this city have received letters asking co-operation of all the mill interests around the lakes.

It is thus to be seen that an effort will be made, probably through the agency of the Northwestern Lumber Manufacturers' Association, to induce a general shutting down of the mills, about October 1, all over the Northwest. But whether or not the sweeping object be attained, the Eau Claire manufacturers mean business so far as the Chippewa valley mills are concerned. A circular is now being prepared setting forth the particulars of the proposition, and within a few days all the mill men of the Northwest will be treated to a copy of it.

There will certainly be one difficulty in the way of carrying the proposed measure into effect. On some of the larger streams, like the Menominee and Muskegon, continuous sawing is necessary in order that each mill be served with logs. Some of the mills have contracts to saw a certain amount for outside parties, and the logs which are back in the stream must be delivered as they come down with the entire mass: in no other way can they be reached. A shutting down of mills not sawing on contract would blockade the entire business of delivering to mills that were. Still another difficulty is in the way of successfully carrying out the scheme: It would be impossible to prevent the determination of the manufacturers to shut down at a certain date from becoming known, and that would stimulate mill operators to drive their saws to the utmost speed prior to the time specified, in order to pile up lumber and be ready for the forced scarcity. It is doubtful if the mill men along the east shore of Lake Michigan will listen for a moment to the proposition to curtail the cut. They owe a small one to the "Menominee fellers," having last spring determined to run their mills for all there was in them, irrespective of any attempted combination. A lumber market growing sicker and sicker during the summer may, however, modify their views on the matter, that latter on they may be willing to do anything for relief.—*Northwestern Lumberman.*

FIREPROOFING OF WOOD.

Several preparations exist which render wood impervious to heat, and also increase its durability. Some of these solutions have been tested on a large scale, and have proved a success. Although these measures are cheap and their success demonstrated, they have, with few exceptions—as, for example, at Frankfort-on-the-Main, the Hoftheater at Berlin—not been employed. Perhaps constructors of theaters will, in view of these frequently occurring catastrophes, at last comprehend that even the incombustibility of the woodwork would be of inestimable value in securing immunity from fires in theaters, and that the spreading of flames would be greatly retarded when, instead of burning rapidly, as dry wood well, it slowly without flames, chars into coal. The nature of wood makes it an easy matter to change it into what an exultant chemist has called a fire-proof substance. On account of its porosity a solution applied to its surface sinks deeply into its pores, thereby attaining a firm hold, and on account of its rigidity exposes the covering to abrasion only. Care should be taken where such solutions have been used, to replenish them from time to time, so as to keep the wood entirely covered. It may be well to state here what is meant by "fireproof." As this term is usually used, it signifies the property of remaining intact in high temperatures such as are produced by the conflagration of buildings; but this is not the state impregated wood or scenery is in. These are destroyed when in contact with a flame; not, however, by burning, but by charring. If we would hold a piece of impregnated scenery in the flame of a Bunsen burner, we will find that the part which was in contact with the flames has been destroyed, that is, it has been charred without producing flames or injuring the parts not in direct contact with the gas flame.

In experimenting on the impregnation of wood, canvas and gauzes, I was particularly careful to use only chemicals as they appear in commerce, and undistilled water. In my opinion one of the chief causes of failure in methods in practice which were successful in experimenting, is that the chemicals employed in experimenting were the pure reagents of the analytical chemist, while those in practice contain many impurities which must necessarily alter the results arrived at by purer supplies.

One of the oldest and best known processes is the coating of woodwork by water glass (sodium tetra-silicate), which for a short time gives good results, but soon the covering drops off. The reason for this is that a covering of water glass is as brittle as ordinary glass, and is readily cracked and broken; and secondly, as it dries very rapidly, it does not enter any distance into the pores of the wood, but rests on the surface. Any jar or abrasive action will, therefore, cause the water glass to drop off in small chips. Another objection to this substance is its solubility. It cannot be employed in places exposed to the action of water.

Another process is to paint wood with a solution of three parts of alum and one part of sulphate of iron; after the wood has received two or three coats of this solution, it is thoroughly dried; than a solution of potter's clay and sulphate of iron, having the consistency of paint, is daubed on the prepared wood until all pores are filled, and a thin layer remains on the surface. It is claimed that in this process the alum and sulphate of iron enter deeply into the fibers of the wood, and form indestructible compounds with the chemical elements of the fibers, which cling tightly to them and cannot, as in the case of water glass, be readily washed out. The covering of clay greatly protects the wood from moisture, so that the first solution cannot be washed out or thrown out by the action of the frost. This sounds well, but in practice would be too complicated.

Another objection which makes it valueless for theaters is that the clay on the surface comes off very readily in the form of dust, and, therefore, must frequently be renewed; it is also an unclean process; an actor unconsciously leaning against a piece of wood thus prepared would afterward appear before the audience with a strip of clay dust on his back.

The following is also a complicated process: The wood is painted with hot glue water until all pores are filled, the number of coats depending on the porosite of the wood used. Then apply to the surface, before the glue dries, a powder consisting of one part of sulphur, one of ochre (or clay) and six parts of sulphate of iron. Care shold be taken to powder and mix these substances well before applying them. This process labours under the same difficulty as the preceding one described.

TO FINISH PINE.

Pitch pine has of late years come into extensive use in England for the furniture and fittings of churches and chapels, and for the woodwork of private dwellings and public buildings. This wood is, in many instances, very beatifully marked in the grain, and is admirably suited for all purposes where strength and durability are desired. It is in its nature exceedingly resinous, and it is the fact of its being so thoroughly impregrated with resin which makes it so durable. As a rule, the practice is to varnish or French polish the better class of wood when made of this wood. French polishing on pitch pine cannot be done under three times the cost of giving it two good coats of good varnish, so as a natural consequence the latter method will, and in fact does, prevail. Pitch pine has a strong tendency to quickly get darker in color. This arises chiefly from the effect of the air upon the turpentine and resin contained in the wood (just as varnish gets dark by exposure), and therefore, except the work is requiaed of a dark color to begin with, we would advise that no stains be used on the mass of the work, and that the varnish used be as light colored as it is possible to be got, for if we varnish with a common dark colored varnish the wood will all the sooner become discolored. The work is first coated with a glue size in order to partially fill up the pores of the wood, and make an impervious surface to prevent the varnish sinking into it. This size has also the effect of preventing the discoloration of the wood, through absorbing the varnish, and this is more especially the case if white pine is used, it being softer and more absorbent than pitch pine. The glue size should not be too strong, or it will crack and chip, and it is better to give the work two thin coats of this than to risk failure by one thick coat. Two thin coats will sink into the wood and so have a firm hold, while the thick coat will remain on the surface and be easily chipped off. The size used should be free from any foreign matter and carefully strained before being used. Another plan dispenses with the use of size altogether, is to give the woodwork a coat of Japanner's gold size thinned with turpentine; this sinks into the wood and produces a hard and firm body for the varnish to be laid upon. By this method the varnish becomes an integral part of the wood and cannot chip or peel off. Of course this process costs a little more than when size is used, but it is so little that it ought not to be a consideration in good work. When the work is to be French polished, no sizing is required.

Many kinds of staining colors may be used for coloring pine, and any desired tint obtained, but except for the purpose of imitating inlaid woods, pitch pine or white pine should never be stained any other color than the darker shades of its own natural color, not necessarily to represent dark old oak, but to represent what it is in reality, pine stained dark. Simple staining solutions are the best. Many very excellent stains may be got by using the ordinary graining colors, viz.: Vandyke brown, raw and burnt sienna, ultramarine blue, etc. In using any of these stains, or in fact any water stains, it is a usual practice to put them on with a brush, and so leave them, but we have found the best plan to be as follows: If we want a dark color, we use Vandyke brown or best Turkey umber with water, tolerably dark in shade. With this we brush over the wood without any previous preparation. We let it stand for a few minutes, then wipe as much of the color off again as we can with a damp rag or cloth. It will then be found that a certain amount of the stain has sunk into the soft parts of the wood, and less so on the hard parts of the grain. By this plan, we bring out the grain or marks of the wood clearer and more distinct than when it is left from the brush alone. If the stain is not deep enough, another coat may be applied in the same manner. For a mahogany stain we use burnt sienna with a little Vandyke brown, then glaze over with Victoria lake; if a yellow stan, raw sienna; for a blue stain we use ultramarine blue, and by adding raw sienna to the blue we form a dull shade of neutral green; for a gray stain, blue-black, with a very small quantity of ultramarine added, and so on *ad infinitum*. All these are permanent colors, which is, of course, an important consideration. We could get more brilliant colors by using scarlet, crimson or purple lakes, but these are fugitive colors, not fitted for use on any works intended to last. It will be understood that we are now speaking of staining woodwork in the mass; that is to say, without imitating inlaying, although most of these colors may be used for that purpose. We here give a list of transparent and semi-transparent colors which may be used as stains:

Red Stains.—1. Burnt sienna. 2. Logwood. 3. Burnt ochre. 4. Madder Lake.

Yellow Stains.—1. Raw sienna. 2. Saffron. 3. Gamboge.

Blue Stains.—1. Ultramarine blue. 2. Indigo. 3. Cobalt.

Brown Stains.—1. Vandyke brown. 2. Turkey umber. 3. Black Japan.

Green Stains.—1. A mixture of Gamboge and Indigo, Gamboge or raw sienna, and ultramarine blue.—*Journal of Progress.*

SWEDEN.

The correspondent of the *Timber Trades Journal* writes to that paper as follows:—

STOCKHOLM, June 28th, 1884.—Advices from the north of Sweden are to the effect that a large rainfall having again occurred there, the floating in the principal districts is being very successfully prosecuted. The importance of this fact is clearly seen in the very inanimate condition of the trade, as a whole, that has been observed during the last few weeks.

With the exception of the demand for whitewood battens and boards, which has been livelier lately, market are getting into a very unsatisfactory condition; and the worst of it is that but little prospect of revival exists for the present. Every mail brings us the intelligence of diminished activity in the coal and iron trades of both Great Britain and Belgium, while the shipbuilding industry in the former country is in a state of collapse. A further diminution of consumption in the above countries may therefore be confidently expected, and ought to be met here by a corresponding decrease in the sawings. The quantity of logs now under process of floating in the Hernosand and Sundswall districts, as well as on the Dal River, is somewhat less than what came down last summer; but as the decrease is probably not over 10 per cent. on an average, there is likely still to be an access of first-open-water stock next year, unless active measures are taken to prevent it.

Shipments have lately fallen off considerably from the three principal shipping districts of the lower Gulf, and although the shipments in May have possibly not been so much less than those of the corresponding month last year, those of June, I anticipate, will show a reduction.

As remarked before, the demand for certain sizes of whitewood has improved lately, and slightly better prices are now being quoted: £5 15s. for 6 and 11 in. unsorted deals, and £4 15s. for 2½×7 and 6½ battens are being asked in lower Gulf, but I am not aware whether these figures have been paid. About £4 12s. 6d. has been obtained for white battens on c.i.f. sales, shippers in several instances having managed to squeeze about half a crown more through cheap chartering than had been calculated on For best redwood brands from Gefle district I have been given to understand that £11, £9, £6 10s., and £5 10s. for 3x9 and 11 red deals have been lately declined for a fair-sized line. Purchases from same district can, however, be effected for even less than these figures, for marks that are not quite as well known. Sellers in both the Soderhamn and Gefle districts have not sold nearly their usual quantity to Grimsby and Hull this season. Importers in the two towns named say that they have done better in Finland, whereas your Helsingfors correspondent informed us some time ago that, to the best of his knowledge, but little had been sold to England from that country, better prices having been reached on the continent. I presume the real truth to be that the great Humber ports have bought very little so far, and are waiting for anticipated further fall before stocking up with best redwood goods.

Freights show a very slight disposition to rise for July shipment, and sailing vessels are holding out for a shade higher rates. Much depends on the position of the vessel and whether of suitable size for an order that may happen to be in hand.

RESPECT OLD AGE.—An old favorite is the remedy known as Dr. Fowler's Extract of Wild Strawberry. Thirty years reliable for cholera morbus, diarrhœa and summer complaints.

NO SUCH WORD AS FAIL.—A failure to relieve or cure summer complaints can never be truthfully applied to Dr. Fowler's Extract of Wild Strawberry. All dealers sell it.

THE HARDEN HAND-GRENADE FIRE EXTINGUISHER.

Ever since P. T. Barnum, the renowned showman, brought to this country and attempted the general introduction of Philip's Fire Annilhilator, about a quarter of a century ago, there have been a number of chemical fire extinguishers introduced, some of which have proved quite successful.

There has been recently introduced a very simple and inexpensive apparatus, called "The Harden Hand-Grenade Fire Extinguisher," and from the result of the numerous tests made before the public in this city, this would seem to fill a want not before obtained.

These little hand grenades extinguish fires on the same principle as the chemical fire engines, which are charged with carbonic acid gas, which by calculation possesses forty times the extinguishing effect upon fire that water has. These grenade extinguishers consist of a glass globe about four inches in diameter that resembles a small jug, and this contains the liquid which produces large volumes of fire extinguishing gas when brought in contact with flames.

The liquid it is said will stand a temperature of fifteen or twenty degrees below zero; thus all danger from its freezing and becoming useless when wanted is avoided.

A representative of the *Sientific American* was present at an exhibition trial of this extinguisher a few days ago, and witnessed the following experiments:

A fire was lighted at the side of a pine board fence, some 8 feet high by 15 long, the surface of which was coated with tar, and a kindling wood and paper placed against it, the whole having a gallon or so of benzine scattered over it. The blaze sprang up almost instantly, and in less than half a minute the flames shot up twenty or thirty feet. To put out this fire, which it took but a few seconds to accomplish, three of the grenades were flung with enough force to break them and scatter their contents over the fence in the midst of the blaze.

Another trial was also made, in which the grenades were hung against the fence and the fire kindled under them. This time the blaze did not reach the height it attained in the former trial, but the grenades burst by the heat when the temperature had reached about 180 Fah., and the fire was again quickly extinguished. A watchman making the rounds of a factory with one or two of these in his hands would find them vastly more serviceable than a pail of water or a small hose, were either of the latter always on hand, as they so seldom are; and the grenades can be successfully used in cases where it is difficult to exactly locate or get near to a fire. To hang them in places where there is liability to fire, so they will burst before a fire has gained much headway, is one of their obvious uses.

For summer houses and stables, where the materials of construction are usually of an inflammable character and water is seldom at hand, these grenades would prove highly valuable. At the brewery of J. C. G. Hupfel a few days ago a fire broke out which promised to be more or less serious, but it was quickly extinguished by using four of the grenades.—*Scientific American.*

Tree Planting.

Lieutenant-Governor Dewdney in his speech at the opening of the North-West Council has the following paragraph:—

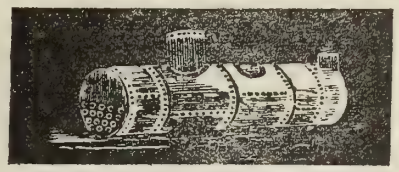
"I shall ask your attention during the session to the consideration of a measure for the encouragement of tree planting. Experiments already made have demonstrated the rapidity with which certain classes of trees will grow, and there is no reason why in a few years the aspect of the settled section of our rich treeless prairies might not be completely changed. A large portion of the states of Illinois and Iowa, some fifteen or twenty years ago were as bare of trees as any portion of these Territories and are now fairly well timbered.

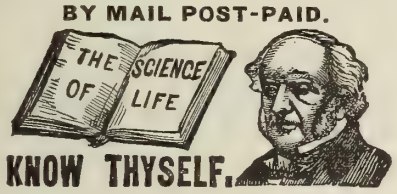
Lumbering on the Ottawa.

OTTAWA July 17.—The quantity of lumber which passed through the Government works so far this year has been much smaller than for several seasons past, partly owing to low water, and partly owing to the large reduction of the cut last year.

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This book should be read by the young for instruction, and the afflicted for relief. It will benefit all. —*London Lancet.*
There is no member of society to whom this book will not be useful, whether youth, parent, guardian, instructor or clergyman.—*Argonaut.*
Address the Peabody Medical Institute, or Dr. W. H. Parker, No. 4 Bulfinch Street, Boston, Mass., who may be consulted on all diseases requiring skill and experience. Chronic and obstinate diseases that have baffled the skill of all other physicians a specialty. Such treated successfully without an instance of failure. HEAL THYSELF

HAGYARD'S YELLOW OIL
CURES RHEUMATISM
FREEMAN'S WORM POWDERS.
Are pleasant to take. Contain their own Purgative. Is a safe, sure, and *effectual destroyer of worms* in Children or Adults.

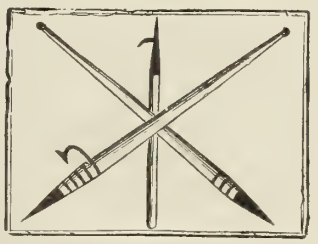
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DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

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The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., AUG. 1,, 1884.

An immense number of lumber trains passed down from Pembroke early this month, containing on an average about 19 cars.

Mr. E. B. Eddy is running the Skead mills, near Ottawa, to their utmost capacity. Saws are cutting 300,000 feet of lumber daily.

Mr. John Rochester, ex M. P. of Ottawa, who retires from the lumber business, has disposed of his stock by auction. The prices realised were from $8.50 to $20 per 1,000 feet.

A pint of linseed (not linseed oil) used weekly, in connection with a thorough washing with hose, has been found to be one of the best substances to prevent scale in steam boilers. The linseed softens the scale so much that it comes away like sludge. Brown slippery elm bark also gives good results.

The imports of hewn and sawn timber into the United Kingdom for May, 1883 and 1884, and for the five months ending May of the same year show some increase. The totals were: May, 1884, 437,125 loads; May 1883, 326,402 loads; decrease for month, 110,723 loads. For the five months ending May, 1884, the imports were 1,363,427 loads for the same months of the year previon 1,111,601 loads, a decrease of 251,826 loads, equaling 150,000,000 superficial feet.

T. E. Spotwood, the timber merchant, has in his boom the largest stock of timber ever brought to this point, and, perhaps, the largest ever cut in the south. It is a piece of pitch pine, navy timber, 72 feet long and 36 inches square at the ends. It contains 657 cubic feet, equal to 7,884 superficial feet. Its value is roughly estimated at $500. This stick was cut by N. J. Stallworth, of Bell's landing in Monroe county. Such an example of Alabama's timber wealth should not be exported until it can be exhibited at the New Orleans exposition. Mr. Spotwood has in his boom another large stick also. It contains 400 cubic feet or 4,800 superficial feet. The sticks together would make a fine exhibit.—*Mobile Register.*

It is reported that Martin Russel's limits on the Bonnechere have been sold to Messrs. Pattee and Perley for the sum of $60,000.

The World's Fair, to begin at New Orleans next December, and continue six months, is a huge enterprise, but will fulfill a great mission. The exhibits will be more varied than those of the Centennial at Philadelphia in 1876.

Of Black locust, Mr. G. L. Record, of Vicksburg, writes to the Aberdeen *Examiner*: I have been using it for 46 years and find it the hardest timber, lignum vitæ excepted, with which I am acquainted. It will take a higher polish and receive a clearer surface than any other, and is not susceptible to indention by blows. The use to which I have chiefly put this wood is for capstan drums, and have run five inch lines on them with heavy strains, and they have become as bright as mirrors but showed no sign of wear or abrasion. There is a singularity about this tree: It flowers very early in the spring, loading the air with its fragrance, and the seeds are scattered broadcast by the winds over all the old fields, ravines, gullies, marshes, etc., take root and in a few years the places where the seeds fall are covered with a thick and rapid growth of timber. It commands a high price for posts, etc., in consequence of its durability, which exceeds that of cedar."

Why the product of so many of the shingle mills of the Northwest should be a disgrace to the name of shingle is difficult to understand from a business standpoint. A correspondent says: "Shingles are getting so poor in quality that they are not worth talking about." If only a few shingle manufacturers made as poor shingles as are dumped on the Chicago market their trade would be ruined. It would be easy for a man who did not know to the contrary to think there was a combination, or association, the avowed purpose of which was to turn out the poorest shingles possible. The manufacturers ought to know, and probably do, that both the retail and wholesale dealers are heartily sick of handling grades of shingles that are everlastingly complained about by the builders. In a majority of cases no man when he buys a bunch of shingles knows what he is getting. There is usually a worm in the core. The white pine shingle makers should understand that they are pursuing a course that will hurt them later on. There are other wood than white pine that at no distant day will figure in the shingle industry, and the time is ripe for their more general introductinn. Let the quality of the shingles made from these woods be assured, and there would be a severe letting alone of much of the trash that is now sold as shingles to the western trade.

FORESTAL EXPERIMENT STATIONS.

We have received from Mr. Adolph Leue, Secretary of the Ohio State Forestry Association, two pamphlets containing papers read by him at meetings of that Association, one as to Forestal Experiment Stations in Ohio and the other as to the steps taken in the same matter in Germany.

What they are doing in the United States and in Germany affords us an example which we may well follow in Canada. Our forests are no more inexhaustible than those of the rest of the world, and it is far harder to reproduce forests than to conserve them. That our system of dealing with our forest lands is capable of improvement is admitted by all who have any knowledge of the subject, and these experimental stations might well be adopted as affording information that would be of great value in framing a more judicious system.

A bill is now pending in the Legislature of Ohio, founded upon the plan proposed by the Forestry Association of the State, and we will lay it before our readers when it comes to hand.

FOREST PRESERVATION.

Among other indications of the increasing interest taken in the subject of the conservation and reproduction of forests is the action that is being taken by the Forestry Association and the Legislature of the State of Ohio, in regard to the establishment of Forestal Experiment Stations. That this is not an unnecessary step is proved by the fact that Germany, the foremost country in the science of forestry, is also adopting these small experimental stations, not being yet satisfied that it has as full a knowledge of the subject as is desirable.

In Canada the necessity for some such step is at least equally urgent, but we have to begin still further back. We should institute such schools of forestry as they have in Germany, France and other countries so that we may obtain a supply of skilled foresters and forestry officials. We should set aside tracts better adapted for forests than for agriculture, and should preserve them in perpetuity for that purpose, not destroying all this wealth at one blow, leaving, perhaps, but worthless land, and future generations in want of timber.

Forestal Experiment Stations will undoubtedly be useful in combination with these steps, but we have to begin much further back.

This is a matter which concerns the whole community and more especially the farmers, for stripping the country of forests means damage to their crops, as well as their having to suffer their share of the wasteful diminution of our resources in the near future.—*Peterborough Review.*

RAFTS ARRIVED.

The Quebec *Chronicle* has the following list of rafts arrived:

July 21.—D. D. Calvin & Co., elm, Sharples (Sillery).

B. Caldwell & Sons, white and red pine, St. Lawrence Docks.

Bolduc, Collet & Talbot, spruce deals, St. Anne de Beaupre.

Smith, Wade & Co., bright pine deals, Paradis' Mills.

McLaughlin Bros., sawn lumber, Cap Rouge.

July 23.—Wm. Mohr, white pine, &c., St. Lawrence Docks.

July 24.—Noel & Waldie, white and red pine, St. Michael's cove.

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c, measured and culled to July 25:—

	1882.	188.3	1884.
Waney White Pine..	739,677	1,340,757	979,509
White Pine.....	2,587,094	1,213,191	903,680
Red Pine.....	392,896	123,556	50,311
Oak.....	643,069	871,427	452,275
Elm.....	441,986	242,609	507,131
Ash	156,081	146,335	341,531
Basswood	256	1,337	262
Butternut.....	1,960	835	1,088
Tamarac.....	1,427	2,765	16,937
Birch & Maple.....	262,273	136,494	185,053
Masts & Bowsprits...	33pcs	—pcs	—pcs
Spars.....	— pcs	— pes	32 pcs
Std. Staves.....	237.3.2.15	341.6.1 1	16.6.2.22
W. I. Staves.....	604.1.0.0	332.6,1.1	69.8.1.23
Brl. Staves.....	10.6.3.4	77.0.0.21	0.6.2.13

JAMES PATTON,
Quebec, July 25. Supervisor of Cullers.

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, July 15, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., N. W., Washington, D. C.:—

301,984.—Boring machine, wood—H. D. Heiser, Walsontown, Pa.

302,012.—Clutch—W. Mathews, St. Jose, Cal.

301,986.—Cutting tooth, insertible.—J. Moon, Newark, N. J.

301,994.—Lath tool rest.—R. H. Hurlbut, Sudbury, Mass.

302,058.—Mortise machine—J. D. Thurston, South Union, Me.

302,006.—Planing machine, box—W. D. Lee, Pillsburg, Pa.

302,100.—Saw, buck—M. Case, Kasoag, N.Y.

302,041.—Saw guard—J. Sill, Picture Rocks, Pa.

301,996.—Saw gummer—H. Ihsen, Allegheny City, Pa.

302,183.—Saw handle, crosscut—J. Adams, jr., Planchard, Mich.

302,205.—Saw tooth grinding machine—A. Krieger, Columbus, Ohio.

301,959.—Sawing machine, circular—F. W. Chapman, Corning, N. Y.

302,181.—Sawing machine, circular—S. C. Williams, Brooklyn, N. Y.

302,121.—Shingle edging machine—J. A. Franzel, Wausau, Wis.

302,192.—Shingle machine, hand—J. R. M. Crawford, Boonville, Miss.

PATENTS ISSUED JULY 22.

302,456.—Chuck, compound lathe—B. D. Whitney & H. W. Howe, Winchendon, Mass.

302,317.—Saw tooth—J. J. Bowen, San Francisco, Cal.

302,375.—Saw tooth, insertible—G. H. Bamford, Trenton, N. J.

302,308.—Screw driver—J. S. Works, Abbot, Me.

302,467.—Stump extractor—G. Chamberlain, Olean, N. Y.

302,363.—Tenoning and cross-graining machine—J. R. Thomas, Springfield, Ohio.

302,529.—Tool, combination—S. H. Beazley, Grapeland, Tex.

302,496.—Tool holder—M. C. Johnson, Hartford, Conn.

A REMARKABLE ESCAPE.

Brief mention is made in our casualty list of the death by accident of Captain Short and a man named Randolph at Sauble Point. Henry Gamble, who operates in the vicinity of Grand Marias, was at Saginaw, Mich., July 1, and gave a representative of the *Courier* the following particulars: "Hook & Randolph have been engaged in putting in a quantity of board pine timber on the Sauble banks, a high bluff on the shore of Lake Superior, and had a force of men at work putting the timber into the lake where it was made up into rafts to be towed below. The bank at this point is 400 feet above the water, and a shute was constructed down which the huge pieces of timber slid into the lake, and a crew of men and a tug then made them up into rafts. On the day of the accident a piece of timber which was crooked was sent down the shute at a terrible rate of speed, and on striking the water it took an unusual course, owing to the crook, it is supposed, shooting seaward and striking a portion of the raft, on which a number of men were at work, struck one of the men, carrying away his head, as complete a severance from his body as though cut with a knife. Going on, it encountered the yawl of the tug, in which was the Captain and two men, struck the former, crushing and killing him instantly, and then, as if satisfied with its bloody sacrifice, stopped in its mad career. The body of the Captain was terribly mangled.

TREATMENT OF TREE WOUNDS.

Valuable trees that have been wounded or mutilated are often sacrificed for lack of the discreet surgery which would repair the injury they have suffered; and Professor C.A. Sargent, of the Bussey institution, has done good service to farmers, fruit-raisers, and landscape gardeners, by translating from the French the following practical hints, which we give with slight abridgement:

Bark once injured or loosened can never attach itself again to the trunk; and whenever wounds, abrasures, or sections of loose bark exist on the trunk of a tree, the damaged part should be cut away cleanly, as far as the injury extends. Careful persons have been known to nail to a tree a piece of loosened bark, in hope of inducing it to grow again, or at least of retaining on the young wood its natural covering. Unfortunately the result produced by this operation is exactly opposite to that intended. The decaying wood and bark attract thousands of insects, which find here safe shelter, and abundant food, and, increasingly rapidly, hasten the death of the tree. In such cases instead of refastening the loosened bark on the tree, it should be entirely cut away, care being taken to give the cut a regular outline, especially on the lower side; for if a portion of the bark, even if adhering to the wood, is left without direct communication with the leaves, it must die and decay. A coating of coal-tar should be applied to such wounds.—*Prairie Farmer.*

GOOD THE YEAR ROUND.—At all seasons, when the system is foul and the digestive powers feeble, or the liver and kidneys inactive Burdock Blood Bitters are required.

CHOLERA AND TRADE.

We have one formidable and unusual enemy to trade approaching, which may neutralize all the good we might otherwise hope for—that is the *cholera*.

At present confined to the south of France and limited in its effects, as not much increasing the ordinary bills of mortality, it has already exercised a baleful influence over the shipping trade, which needed no further obstacles to render it unprofitable, but which will now have to run the gauntlet of the quarantine laws and all the delays and costs which they involve. Already the Mediterranean ports are closing against all ships from the East, and if, as it is most likely, the epidemic spreads northward, the Channel ports will also require to be carefully watched, and no doubt a very rigid examination of all vessels arriving from the Mediterranean and a long quarantine in suspicious cases will be the result.

The sole chance left to our mercantile steam fleet lies in its celerity and quickness of despatch. Their voyages are counted by hours, and their navigators are impatient of the smallest delay, even in loading or discharging, lest the small profit of the voyage should be swallowed up by the expenses of keeping the officers and crew. Imagine a steamship making for her port at the rate of 300 or 400 miles a day, the captain counting to deliver his cargo at the rate of 500 tons per diem, being brought up short by a quarantine boat, and ordered into some lazaretto apart, to fly the yellow flag for ten days or a fortnight before *pratique* is allowed him ! Regarding the present rate at which the business of the world is driven along, it would seem like a paralysis of the system and a total reversal of the habits of trade. Steamers would cease to be of their usual account in shipping, and better freights than can now be obtained would not induce them to charter in the face of this new and unexpected impediment.

As a social visitation it is not for us to consider what disastrous consequence may result from this pest, having at such a season of the year obtained a footing in Europe. It seems to have been boldly met by science, and collared at the seaside, though many of the inhabitants of Toulon fled for their lives on its first announcement, thinking, with Falstaff, that discretion was the better part of valour. The disease is better understood now than it was when it came among us in 1849, and every precaution will no doubt be taken to limit the area of its ravages. But after all it is common in India, in the chief cities and stations of the presidencies—at Calcutta, for instance, where Europeans go and live out long lives in the midst of it; so that panic seems unreasonable, even should it reach London.

It is remarkable how suddenly it terminated on its great visitation aforesaid. As the summer waned the daily rate of mortality increased, till in the early part of September 400 deaths per diem were announced. The weather cooled, and the next week the number diminished by more than half, and in another week or two it was almost forgotten. People treated it as a conquered enemy, and went about their affairs without the smallest dread of it; nor did it reappear except in a few isolated cases of poverty, with the total absence of all sanitary adaptations.

But whether the cholera is limited to the ports of the south of France or not, there is no doubt but it will very seriously affect the steam shipping trade of Great Britain with the Mediterranean ports.—*Timber Trades Journal.*

VARIATIONIN THE LEAVES OF TREES.

The number of our ornamental trees is largely increased by the fact that individual trees sometimes vary from the usual or normal form of the species. This variation occurs in the branches, which may be pendulous, and produce "weeping trees," or erect and fan-like. The leaves vary greatly, both in their form and colors, and the flowers and fruit may strikingly depart from those proper to the species. The weeping beech, the fern-leaved and purple beeches, are three strong and valuable ornamental trees, produced by as many different kinds of variation, affecting the branches, and the form and color of the leaves. Some variations are produced from the seed, the young seedling trees showing their peculiarties from the start. Variations of this kind are to some extent continued by seed. When the seeds of the purple beech are sown, the nurserymen expect that a large percentage of the seedlings will have purple foliage. Variations are produced in another manner. A branch appears upon a tree of the normal kind, having a different habit of growth, or bearing leaves, flowers, etc., quite unlike those upon the rest of the tree. The term "sport" was long ago applied to variations occurring in this manner; Darwin called them "bud varieties." Such forms are propagated by cuttings, layering, grafting, etc. They often differ from the usual form of the tree in the readiness with which they can be propagated, and sometimes as to their hardiness. The variations in the form of the leaves often give to the tree a very different expression from that peculiar to the species, and the foliage, instead of being dense and massive, is light and feathery. Deciduous trees with simple leaves, may be divided into two groups; one with feather-veined, and the other with radiate-veined leaves. In the first, like the beech, the apple and many others, a strong mid-rib runs lengthwise of the leaf, from its base to its tip, and smaller ribs or veins run from the mid-rib to the margin of the leaf, somewhat like the plume upon a feather. In the other group, the radiate-veined, three, five, or more equally strong ribs, start from the base of the leaf, and diverge towards the circumference, as in the maples, the buttonwood tree, etc. Such leaves are also called palmately veined. We may look upon a leaf as a framework of ribs or veins; these are woody and firm, and give strength to the leaf. The spaces between these are filled with a soft, green, pulpy material, in which the work of the leaf is carried on. In the leaves of the normal form, there is a great difference as to the completeness with which the margin is filled out Sometimes there is a break in the margin, not even the slight notches so common; such leaves are called entire. The margins of other leaves are variously indented, and this varies from fine notches, to depressions half way or more to the mid-rib, producing that great variety in outline, so noticeable in leaves. These forms of leaves are characteristic of species. Leaves ordinarly entire, or with slight indentations on the margin, may vary by having unusuallv deep divisions; such leaves are popularly known as cut-leaved. The feather-veined leaves have the divisions run from the margin towards the mid-rib, and when these are deep the leaves are often called "fern-leaved." The unusual indentation or cutting of the margin of radiately-veined leaves, produces a very different set of forms. The native silver maple (*Acer dasycarpum*), is one of our most valued trees for shade or for fuel. Among the many thousands of seedlings that have been raised, a number have shown marked variations in their leaves, and several have been multiplied in the nurseries.—*American Agriculturist.*

LAUNCH OF A GREAT SHIP.

The Cunard Line steamer Umbria, the largest vessel afloat except the Great Eastern and City of Rome, was launched June 25 from the yard of Messrs. John Elder & Co., Fairfield, Govan, for the Cunard Company. She measures 8,000 tons gross, her length is 520 feet, her breadth 57 feet, and her depth 40 feet. Her engines are designed to indicate 12,500 horse power, the most powerful marine engines yet constructed. She was named the Umbria by the Hon. Mrs. Hope. She is built entirely of steel, is divided into ten water tight compartments, and has five decks. The promenade deck extends for 300 feet over the whole breadth of the vessel, and the saloons will all be proportionately large. It was matter of remark among the company present at the launch that it is less than ten months since the keel of the vessel was laid. The new ship will run between new York and Liverpool.

UNKNOWN TO SCIENCE.—That preparation is undiscovered which can surpass Dr. Fowler's Extract of Wild Strawberry as a cure for cholera morbus, dysentery and Summer complaints.

TO CURE THE TOBACCO HABIT.

A correspondent of the Philadelphia *Rerord* says :—

"Your answer to E. B. regarding the tobacco habit is partially incorrect and very discouraging to to those wishing to abandon an injurious habit. You are quite right in saying that the only cure is to "quit;" but my personal experience teaches there is other aid than "will power in doing so. I tried tapering off till a 5-cent piece would last me six weeks, but was as far from quitting as ever, I saw that the habit had occasioned an unnatural secrtion of saliva, which overcharged the glands and created the nervousness unless something was in the mouth to stimulate them to the action necessary to its discharge. A remedy was needed that would occasion this discharge and act upon the glands so as to reduce the secretion of saliva to a natural quantity. The following preparation answered the purpose admirably: Four ounces of pulverized slippery elm bark, two drams of tanic acid mixed to a stiff paste with gum arabic water and kiln-dried to a hard cake in oven; to be used whenever a desire for tobacco is felt by putting a small bit in the mouth and allowing it to gradually dissolve. It should be used as long as any desire is felt for some substance in the mouth. Its continued use in sufficient qualities would be a sure cure in many cases of chronic diarrhœa.

Hoping you will use this not only for the benefit of E. B., but of many others who wish to discontinue the use of the magic weed, I remain.

THE ELECTRO-MOTOR.

It may certainly be said that for pumping, sawing, and such like operations of a large country house, an electro-motor, actuated by the dynamo which lit the house at night, would be cheaper and quite as effective as a steam engine. Sir William Armstrong, at his house near Newcastle, has utilized a water-fall in his grounds to light his house by night and to supply it with power by day. The waterfall is 1,500 yards from the house. It actuates a turbine, which it connects by a belt to a dynamo electric converter, capable of transmitting about ve horse-power into a current of electricity The current is conveyed by a suitable conductor to the house where it works forty Swan lamps. In daylight it works a saw mill. Sir William Siemens, at his country seat near Tunbridge Wells, uses a steam engine, the waste steam of which warms the hot-houses. During the night the primary machines actuate two powerful electric lights, which are employed in forcing the growth of various fruits and plants which live, as it were, in perpetual sunlight—or ts equivalent. During daylight one of the machines is used to work a chaff-cutter and the other machine is at the farm a quarter of a mile away; the other does the pumping of the establishment. At night, of course, they are employed for light.—*Nineteenth Century.*

A Large Dam.

A French engineer in Brazil has lately been selected to construct what will probably be, when completed the largest dam in the world. The dam will be 940 feet long by 58 feet high, and two smaller ones will close side depressions. This work will, it is calculated, back the water over 1,500 acres, and retain 14,000,000 cubic meters of water, sufficient to provide for all the cattle of the regions during three years, and for the irrigation of 5,000 acres of flat bottom land alongside the river bed below. The rivers of Creara flow in the wet season alone.

English Wheat Growing Useless.

As a bushel of wheat can be brought England from any North American shipping port for fourpence (which is double the freight it was in April), or about fifteen pounds weight for a penny, wheat-growing in England may be expected gradually to die out, as useless and unprofitable.—*Timber Trades Journal.*

GREAT NEGLIGENCE.—There is great neglect with most people to maintain a regular action of the bowels, which causes much disease. Burdock Blood Bitters cure constipation.

DOWN IN DIXIE.—The wife of Mr. J. Kennedy, dealer in drugs in Dixie, was cured of a chronic cough by Hagyard's Pectoral Balsam. The best throat and lung healer known.

Timber Limits and Mills
FOR SALE.

Comprising about 300 miles of timber limits, in the counties of Joliette and Montcalm, in the Province of Quebec, bearing Spruce Pine, and Cedar, traversed by the La Marreau, Dufresne, and other rivers.

About 25 acres of land at Montcalm, on the La Warren river, 40 miles from Montreal, with fine water power, saw-mill, store, dwelling and outbuildings.

About 100 acres of land at Charlemagne, at the mouth of L'Assumption River, 17 miles from Montreal, with a steam saw mill of large capacity, manager's house, dwellings for employees, machine shop, bakery, store, wharves, etc., ample facilities for loading vessels. A very complete establishment.

Booms and dams on the various rivers. The whole in running order offers a capital opportunity for doing a profitable business, and will be sold on favorable terms at a low price.

Apply to the
LIQUIDATORS of the EXCHANGE BANK
6t10 Montreal, Canada.

LUMBER DRYING APPARATUS

A Hawkins' Patent

DUPLEX HEATER

Containing 2000 feet of 1-inch and 2000 feet of 1¼-inch Wrought Iron Pipe, with casing and conducting pipes and a 60-in. STURTEVANT BLOWER, all in complete working order. Can be used either with exhaust or live steam, or both.

This is the latest and most complete method of drying lumber, and will be sold low.—Apply to

T. McAVITY & SONS,
12, King Street, ST. JOHN, N.B.

MILITIA.

SEALED TENDERS, marked on the left hand corner of envelope "Tenders for Militia Clothing and General Store Supplies," and addressed to the Honorable the Minister of Militia and Defence, will be received up till noon of Monday, 11th August, 1884.

Printed forms of tenders, containing full particulars, may be obtained from the Department at Ottawa and at the following Militia Stores, where also sealed patterns of all articles may be seen, viz :—The offices of the Superintendent of Stores at London, Toronto, Kingston, Montreal, Quebec, and St. John, N. B.

Tenders not in relation with sealed patterns of the Department or accompanied by special patterns will not be received.

No tender will be received unless made on printed forms furnished by the Department.

The material of all articles will require to be of Canadian manufacture and Canadian workmanship.

Each tender must be accompanied by an accepted Canadian bank cheque, for an amount equal to ten per cent. of the total value of the articles tendered for, which will be forfeited if the party making the tender declines to sign the contract when called upon to do so, or if he fails to complete the service contracted for. If the tender be not accepted the cheque will be returned.

The Department will not be bound to accept the lowest or any tender.

C. EUG. PANET,
Deputy of the Minister of Militia and Defence
Ottawa 4th July, 1884.

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Augusta, Maine.

FORESTAL EXPERIMENT STATIONS.

To the Editor of the Canada Lumberman.

DEAR SIR,—I mail to you a copy of a paper on "Forestal Experiment Stations," which sets forth a plan of organizing such an institution in Ohio. This plan has been made the basis of a bill now pending in the Legislature of this state. There can be no question as to the fact that the passage of this bill would promote the interest of forestry not only in Ohio, but also in other states, and in the Provinces of the Dominion of Canada. I am now making an effort to keep the subject before the people and to show our legislators the interest manifested in this question in the different parts of this great continent, which, I venture to believe, may ultimately induce them to pass the bill. To this end I solicit the co-operation of the leading journalists of this country and of Canada, by asking them to treat the subject in an editorial of their respective papers. These articles I shall collect and append them to a memorial to be sent to every member of the General Assembly of this State. You have more than once touched upon forestal expermental stations, and an article from your pen is very desirable. Please favor me with a copy of your paper containing the desired article.

I also shall send you a copy of a pamphlet by Supt. John B. Peaslee. The little work contains, as you will see, nothing new, but abounds in what may be called supposed facts and sentimentalism. It has been published at the expense of the Ohio State Forestry Association and has been distributed broadcast by that body, so that the edition of 7,000 copies is about exhausted.

If agreeable to you I shall take pleasure in sending you an occasional correspondence on forestal topics.

Respectfully Yours,
ADOLPH LEUE,
Secretary of Ohio State Forestry Association.
Cincinnati, Ohio, July 9, 1884.

FORESTRY.

The following letter appears in the Toronto *Globe*:

SIR,—Allow me to call the attention of your readers who wish to form plantations or windbreaks, and do not wish to wait too long for their benefits, to a tree valuable for many purposes, easily propagated, and of very rapid growth. This is the Silver Poplar. Within twenty years after planting, it often produces trees of 60 or 70 feet in height, 60 feet in spread, and with a trunk more than three feet through at the base. One such tree, to my knowledge, lately yielded four cords of firewood. I have had some of this timber kiln dried and tested for various purposes. When sawn and polished it is of a handsome light yellow colour, with a beautiful waving grain. In testing it for strength, it was found exceedingly tough, and calculated to bear a much greater strain than pine. In testing it for fuel, it was found to more nearly resemble maple than any other wood, giving as hot and almost as lasting a fire, and leaving a bed of coals almost similar. It is easily propagated from cuttings of its last grown wood, cut a foot long from above a bud to below a bud, and thrust nine inches into the ground.

Any one with whom it is an object to grow timber very rapidly could hardly do better than plant a square block of trees four feet apart each way. They will then grow tall and single stemmed. Even in ten years time they will yield a quantity of wood—that is to say in about one-third of the time in which most other trees will give as much. Anyone, however, wishing to grow them, should be warned that they have, as have many of the poplar varieties, a tendency to throw up independent shoots or suckers, especially when cut by the plough. These are of course easily kept down by care, and will not, according to my experience, be observed near more than one tree in twenty. They will do no injury but be rather of a benefit in forest strips planted with these trees, so far as the value of the forest to the country around is concerned, as a forest dense with undergrowth forms a far better reservoir of moisture than one where nothing but the larger trees are found. There will, however, be but few of em there, as the undergrowth, in tha poplar forest, where cattle were excluded, would most likely spring up from maple and other seeds brought hither by the wind. The only trouble on this point will be found near ploughed land, as, where the plough breaks the roots, young shoots will rise. Where they can be planted beside permanent grass lands or a narrow strip of such left surrounding them, there will be no trouble at all.

In cities, where these trees have been planted in numbers, some objection has been made to them on account of the falling, for about a week in June, of the catkins, as they are called, which are covered with a sort of cotton down. In the Silver Poplar, however, these are small, being about two inches long, and the amount of down falling is not of sufficient amount to create any annoyance by being blown into windows. Another tree of the poplar variety is very objectionable in this respect, the catkins being very heavy with cotton and nearly six inches long, covering the ground below for weeks with a heavy mass of disagreeable rubbish, on account of which habit many of these trees were cut down in Toronto streets some years ago. This is, however, very different in all respects from the Silver Poplar, its leaf being very large, dark green on one side and light green on the other, smooth on both, and the young wood glutinous. The Silver Poplar, on the contrary, has a small leaf, dark and smooth on one side, almost white and downy on the other, as are also the young twigs which bear them. During twenty years, in which I have observed certain of these trees, the suckers thrown out have been very few, and the amount of down falling not worth mentioning.

Where a farm has, as too many have, been denuded of its trees, and the owner wishes in a short time to obtain shelter and timber, this tree, where it can be planted under the conditions above named, will be found very valuable. It would prove especially so, I should think, to our North-West and Manitoba farmers, as, though they have poplar in quantities, it seems to be a much inferior variety. If North-West editors think so, they might be of service to their readers by copying this letter. The tree has the slight disadvantages mentioned; but it has also the advantages, and will be as large in ten years many maples at twenty-five.

Such trees as this, however, though valuable because they can be rapidly grown, are not t be compared to the solid beech and maple, the pine, ash and elm of our native Canadian forests, which are all too rapidly, throughou much of Ontario, passing from the land. Few are aware how rapidly, but you will find on enquiry among the works in wood that our furniture manufacturers have no more walnut; they find white ash difficult to obtain; and even basswood of which we formerly possessed vast amounts, is now so diminished in quantity that the swamp elm has to be substituted. Our agricultural implement makers and car-builders, too, already find good oak, ash, and rock elm so hard to obtain that, where they can, they use iron instead; and in many other woods the present deficiency, as compared with the former abundance, is extremely marked.

Very little has been done towards replanting forest trees so as to grow in forest form. What is being done along the roadside serves an excellent purpose in its way, but the roadside tree grows to branches, not to trunk, and, therefore, not to timber, to obtain which they must be planted in quantity, and but a few feet—say but four—apart at first. So little has been done in this direction, that you with difficulty find in Ontario an acre of planted forest, though, since the matter has lately been brought before the public, many are turning their attention that way, and some are preparing young trees for the purpose. But when we consider what a period must elapse before a plantation of the most desirable woods can supply timber of any size (though in the meantime, it should always be remembered, very useful for shelter), it is above all things to be hoped that many of our farmers will see their way to preserving some portions of the forest which yet exist on their lands. With the view to obtaining valuable opinions as to how far legislation can assist in this matter, I lately addressed communications to the various County Councils in Ontario. Some of the Committees to whom these were referred have replied. I should be glad if others would do so at their earliest convenience.

Yours, etc.,
R. W. PHIPPS.

Toronto, July 10.

THE FORESTRY EXHIBITION.

The London *Times* of July 1, commenting upon the International Forestry Exhibition, which opened on that day says: Centuries will scarcely repair the havoc wrought by fifty years of unrestrained arboricide on the Alps, the Pyrenees, the Appenines, in Scotland, Ireland, Denmark, and North America. Half Spain has been reduced to a parched desert by the insanity, though of longer standing than this single century, which denuded its sierras of their shade. Italy tottering on the brink of a similar fate as the result of more recent folly. Ireland, as was lately explained, has been impoverished by the destruction of sheltering foliage. Vast tracts of Jutland have been changed into heathery wastes by the felling of the pines. In North America settlers acted as if timber were a mere incumbrance and obstruction. Since it has been admitted to be commercially of value its fortune has been almost worse. The population has regarded its forests as a mine, of which the proper destiny was to be severed straightway from the soil. For 20 years after the appropriation of California by the United States the hatchet raged with fury against the noblest woods in the universe. In defiance of laws it continues its vindictive attacks. Fear for the supply of fuel brought the first pause in the devastation in Europe. Frenchmen and Germans began to be alarmed that cutting without planting must end in nothing to burn. In this country, which could dispense with wood as fuel, a similar return to common sense proceeded from a discovery that soil incapable of agriculture might give a profit as woodland. Only gradually has the more important discovery been made, or popularized, that trees may be in the highest degree profitable though they be neither timber nor fuel. A mass of irrefutable evidence has demonstrated that trees play a part in economy of nature for which no equal substitute can be found. Coal may supplant wood as fuel. Iron may replace teak and pine in shipyards. Danish peasants may do without wooden clogs, and authors may learn to dip their pens in other gall than that from the oak. Nature very seldom arrives at an effect in one way without leaving room for human ingenuity to accomplish it in another. Some natural processes are at once so beneficent and so complex that for man not to avail himself of them as they are is to sacrifice irretrievably the most manifest advantage. Nature fits up in every wood a perfect laboratory auxiliary to the ends for which the farmer labors. Agriculture which strips a country of wood condemns itself to the superfluous cost of trying, with a success at best only partial, to create artificial alternatives. The Laputan condensers of sunbeams out of cucumbers were not more foolish than the exterminators in the Old World and New of the vegetable reservoirs otherwise styled forests.

A THEORETICAL BUSINESS CHAT.

We, among others, have lost quite heavily of late through the *honest failure* of three firms who at one time seemed fully competent, financially, to meet all the waves of adversity which might come, but they all relied too much upon the promises of personal friends and were forced to succumb, as is generally the case when the meeting of obligations depends upon the action of a third party.

It would be well when one is about to enter trade, and concludes that his reliance rests chiefly upon the promises of personal friends, to be sure of it that this man leans upon a broken reed. If he deems it essential to his success that he must secure some one peculiar locality for the establishment of his mill, above all others, he could not entertain a greater fallacy. And a too common belief that certain salesmen must be employed, if competition is met with sufficient strength, to endure a formidable encounter with a rival of enterprise, betrays at once the weakness of a would-be mill or factory owner. The idea of a large building, brilliantly decorated, a finely furnished office and splendid equipage, is one of the most delusive and fatal of all the notions apt to be considered seriously by the inexperienced.

The miller or manufacturer, in fact anyone who starts out depending largely upon such auxiliaries, will repent his folly and cry for help, when, alas! none of his pillars of strength will do to lean upon even for a single moment.

Real merit, and that alone, can be utilized when the pinch comes. Dreams of a splendid building, hosts of friends, best salesmen and a fine location, all vanish when paying patrons are wanting, and the expense account absorbs not only profits, but capital itself. The manufacturer or merchant finds out not only that he has one weak spot, but many, and that the successful tradesmen he had expected to outstrip have suffered nothing by his efforts, but, on the contrary, owe him an obligation for convincing the custom of both places that mere pretrense and sham will not pass current among honest people.

It is well to have an establishment of easy access and well furnished with all modern appliances, machinery and the like, to make out of the material at hand the best that can be made. Again, one must be assured his qualifications are not outbalanced by his competitor, and by no means ever allow a rival to think for a moment that he can outdo you in politeness and courtesy to all with whom you may come in contact. Reduce expenses to the lowest possible point commensurate with the production of good goods, ask a fair price and be positive that no one can undersell you and make a profit; he may sell at less than cost, but such do not hold out long.

In conclusion, in the majority of instances where we have lost heavily by others' honest failures it has been among a class who, though understanding their own business thoroughly, possessed the ambition which characterizes Americans, and, to make a better show, dabbled in some outside business. This generally means failure in the end, unless you have the amount so invested to spare without crippling your own business.—*Lumber Trade Journal.*

THE C. P. R.

The *Monetary Times* of July 11, contains the following:—The assurance of the Canada Pacific directors that the means already provided are sufficient to enable the company to complete the construction of the line, was needed in the London market. The heavy fall in the price of shares had caused some uneasiness there. But as the *Economist* remarks, the downward movement, "is in the main due to New York selling," and "when the company would only have been too glad to avail itself of the London market, London was flooded with shares already placed in America." How the attack on stocks in the position of that of the Canadian Pacific is made, the New York *Commercial Bulletin* explains: "The most sensitive points in the lean market are selected for special attack. Railroad and other enterprises in an incipient stage and which are dependent on credit for their completion are the favorite objects of assault. It is known that a certain amount of the paper of such corporations is afloat bearing frequently the endorsement of its supporters and backed by new securities. If such paper can be rendered unnegotiable, or its collateral impaired, or if suspicion can be cast upon the names it bears, that is an achievement to the purpose." In such a state of the market, it is fortunate for a road under construction when, without so borrowing, it has the means provided for its completion. And in this position the Canadian Pacific is now declared to be.

A Big Elm.

On Wednesday last, as some parties were travelling through a bush a few miles northwest from this village, they found a giant elm tree which measured thirty-three feet in circumfer ence four feet from the ground being eleven feet in diameter. The tree is very high, and its magnificent crown of foliage can be seen for miles towering high above all the other trees of the forest. This tree is said to be the largest tree standing probably in this township.—*Ex.*

Chips.

A clean and excellent coating for wood is asbestos paint, or better still, the thicker asbestos concrete. These substances act like true paint, adhere tightly to the wood, give good protection against high temperatures, and do not readily rub or chip off. It has but one objection, that is, its solubility in water; but for interior theater purposes this is no material objection. Great care must be taken in purchasing this article, and it should always be tested before being used, as much of the so-called "abestos paint" which is sold is entirely worthless.—*C. John Hexamer, in the Spectator.*

A TRAVELLING man for a well known Chicago lumber firm thus glowingly writes about what he has seen on his present trip west: "Kansas never, in the history of the white man, looked generally as rich as this year. The State looks too enchanting for any effort on my part to describe. Corn, rye, barley, flax, wheat and the grass, and all the vegetables, are out this year in their very finest bib and tucker. The harvester is busy cutting down the wheat and rye. Trade has been light with me except in Kansas. Wishing you all the blessings in the catalogue, and complimenting you on the almost universal circulation of your valuable journal." The above is certainly encouraging for lumber interests in Kansas.—*Northwestern Lumberman.*

THE Ottawa *Citizen* says:—The freighting of square timber by rail from the Upper Ottawa districts is steadily increasing. As an instance of this it may be quoted that Mr. David Moore has, during this season, shipped all his heavy timber cut above Lake Nipissing, from North Bay to Papineauville, by rail, where it is rafted for the Quebec market. The Klock Brothers have also adopted the same principle, and Mr. Alexander Fraser, of Westmeath, is following in the same strain. This is another instance of what the Canada Pacific is doing in Ceneral Canada. Mr. Fraser will, during present season, probably ship 250 car loads in the same manner. Other lumbermen are waking up to the fact that the liberal terms of the Canadian Pacific in regard to freight render it cheaper for them to ship by rail than to re-raft at several points between the upper waters and Quebec.

THE dealers at several of the northwestern markets are complaining that, owing to the different rates in favor of Chicago to Missouri river points, it is nearly impossible for them to work the territory that heretofore has been common ground. While in no way advocating any tariff that does injustice to any one, we will briefly consider the conditions as they now exist. Calling the differential rate 6½ cents, the freight charges on a thousand feet of lumber would average about $1.50 more from Eau Claire, Chippewa Falls and Menomonie to Missouri river points than from Chicago to those points. At first blush this would appear to give the Chicago dealers a big advantage; but really it does not. It must be kept in mind that at the points which have the higher rate the lumber is loaded on cars at the mills. At Chicago the lumber is loaded at the yards but before this can be done lake freight rates varying from $1.25 to $1.75 must be paid. This at once offsets the differential rate of 6½ cents. Further than this, the Chicago dealers have an extra handling bill in transferring their lumber from the vessels to their docks. All things considered there is no reason why the territory that has been operated in by the dealers of both Chicago and the other towns named should be abandoned by those of the latter.—*Northwestern Lumberman.*

Tree Moving.

A Sarnia architect, Mr. Blaker, has done a notable thing in tree-moving. He transplanted a handsome maple, which was one foot in diameter and 30 feet high, from one part of the town to another, hauling it by means of a capstan. It used to be thought a preposterous idea to move trees of such dimensions, but it is now found to be the easiest, quickest and cheapest mode of establishing shade trees in parks and boulevards. The large trees which were transplanted in Victoria park three years ago are thriving well.

THE NEW BRUNSWICK TRADE.

The St. John, New Brunswick, *Globe* gives a list of the shippers of timber from the ports of New Brunswick, with the amount of the shipments, for the first half year of 1784. The shipments as compared with the same time last year show an increase of some five millions of superficial feet in favor of the present year, the figures in 1883 being 81,611,241 superficial feet. Below are the shippers and statement of shipments:—

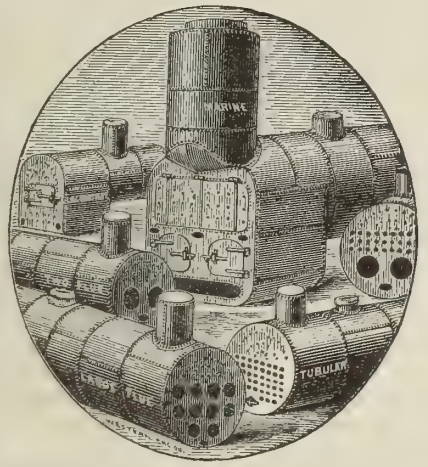
Shippers.	*S. ft. Deals...*	*Tons Birch...*	*Tons Pine ..*	*M. Palings ...*	*C's. oth'd.*
Alex. Gibson....	56,665,870				4
W. M. Mackay...	14,207,290	2,767	412	33½	15
S. Scofield.....	5,937,898	1,562	559		
Guy, Bevan & Co.	4,967,454	1,001			..
R. A. & J. Stewart	3,925,371	2,103			15½
J. E. Knight, Musquash	991,612				...
McLachlan & Wilson	117,623	482			5
Grand totals...	86,813,118	7,915	971	33½	39½

A Lumber Case Settled.

OSWEGO, N. Y., July 14.—S. R. Wegg, lumber dealer, jailed in March last for fraud, preferred by Ross & Co,, Quebec, interested with him in business, was released to-day. Ross & Co. are now satisfied there was no intent to defraud and Wegg confesses judgment to them for the amounts claimed.

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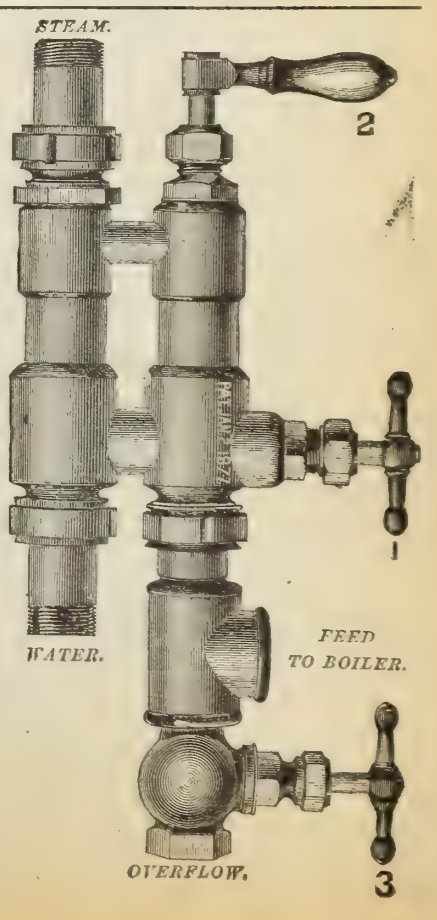
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12l8



Market Reports.

TORONTO.

From Our Own Correspondent.

JULY 24.—Two weeks have passed since my last letter, and still no improvement in the lumber trade, indeed, some dealers say, the bottom has fallen right out. Certain it is that retail dealers feel extremely glum at the present state of trade, but I still hold to the opinion that the fall season will be a fairly busy one, so far, at least, as the home market is concerned, but with the presidential election on hand, which always takes the attention of our American cousins away from their private affairs, we need not expect to have trade anyway rushing this season; although choice lots of clear and picks will find a ready market at fair prices. The trouble, however, is that the percentage of the upper grades in our market is so small that our home market is constantly choked up with the coarser grades and as a consequence prices will rule low. The quantity leaving our docks is small and shipments will fall short of last years, unless it moves much more rapidly for the remainder of the season. The amount of lumber on the docks and piled in the yards varies but little from that of the same period last season.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
Scantling and joist, up to 16 ft	13 50
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 00
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	20 00
" " " 32 ft	21 00
" " " 34 ft	22 50@22 50
" " " 36 ft	24 00
" " " 38 ft	27 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	24 00
" boards "	20 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 00
Three uppers, Am. inspection	35 00@40 00

B. M.

1½-inch flooring, dressed	30 00
1½ " " rough	16 00
1½ " " dressed	25 00
1½ " " undressed	15 00@15 00
1 " " dressed	22 00
1 " " undressed	16 00
⅝ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ₱ M	2 90
Sawn Lath	2 75

MONTREAL.

From Our Own Correspondent.

JULY 25.—We have very little to report in the lumber market for the past two weeks, as business has been duller than at any period during the year. There has been no demand in a retail way, but business is said to be pretty brisk in New York, so it is possible we may get our share a little nearer the fall. Laths, both here and in Ottawa, are very scarce, and prices keep firm. Lumber stocks are at least sufficient for the demand, and in the present state of matters dealers are very careless about increasing them. Prices in the yards are steady, but certainly not any higher. We quote as follows:

Pine, 1st quality, ₱ M	$35 00@40 00
P ne, 2nd " ₱ M	22 00@24 00
Pine, shipping culls, ₱ M	14 00@16 00
Pine, 4th quality deals, ₱ M	11 00@12 00
Pine, mill culls, ₱ M	8 00@10 00
Spruce, ₱ M	10 00@13 00
Hemlock, ₱ M	9 00@10 00
Ash, run of log culls out, ₱ M	18 00@20 00
Bass, " " ₱ M	17 00@20 00
Oak, ₱ M	40 00@50 00
Walnut ₱ M	60 00 100 00
Cherry, ₱ M	60 00@80 00
Butternut, ₱ M	35 00@40 00
Birch, ₱ M	20 00@25 00
Hard Maple, ₱ M	25 00@30 00
Lath, ₱ M	1 75@ 2 00
Shingles, 1st, ₱ M	3 00@ 0 00
Shingles, 2nd, ₱ M	2 50@ 0 00

SHIPPING.

The shipment of deals has fallen off very considerably since the date of our last report. The rates of freight to the River Platte are steady at $13 to $14, but there have been no engagements. Rates for deals to Europe tend downward and may be quoted from 40s. to 50s. according to destination.

CORDWOOD.

The market is very dull and prices tend downward. Stocks are ample, but since the St. John Baptist celebration there has been no demand even in a retail way. For wholesale lots at the wharves ex cartage we continue to quote:

Long Maple	$ 6 00
Long Birch	5 50
Long Beech	5 00
Tamarack	4 50

LIVERPOOL MARKETS.

We have advices from Liverpool by last mail which state that the consumptive demand continues very fair. Several cargoes of Quebec goods had arrived, but no sales reported by which to test the market. The heavy imports of spruce deals have caused prices to decline, and the value of a cargo of St. John, of fair specification, is £6 per standard ex quay. Pitch pine is in rather better repute though difficult to sell, and the general opinion is that prices will not go any lower. A lot of Red pine deals from Quebec were placed at £7 15s. per standard ex quay. Halifax spruce deals were sold at auction and averaged £6 1s. 3d. per standard, and two cargoes of St. John, N. B., averaged £6 2s. 6d. per standard.

WINNIPEG.

The *Commercial* of July 22nd says:—There is no change in the lumber trade. The demand still holds good, in fact much better than was anticipated at this season of the year, but, as yet, it is impossible to give correct quotations, but we hope to have this remedied at an early date. It would be greatly to the interest of large dealers to be able to give reliable quotations to the public.

OSWEGO, N.Y.

1½, 1½, 2 & thicker uppers	$42 00@44 00
" " " pickings	32 00@34 00
" " " " cutting up	22 00@24 00
" " " " cutting up peckings	32 00@34 00
1 inch selected sidings	28 00@30 00
1½ " " "	30 00@35 00
1 & 1¼ in. box	12 00@14 00
" " sidings, dressing and better	20 00@25 00
1x10 in. 13 ft, dressings and better	22 00@25 00
" " shipping culls	14 00@15 00
" 14 & 16 ft. dressings and better	20 00@23 00
1x10 in. 14 & 16 ft. ship culls	14 00@15 00
1x12 " " " "	14 00@15 00
" " " daessings and better	20 00@23 00
1¼ in. strips selected	23 00@25 00
1x" " dressings	16 00@17 00
" " culls	10 00@13 00
Ash.	
1st & 2nd, 1 to 4 inch	18 00@22 00
Culls " "	10 00@12 00
Basswood.	
1st & 2nd, 1 & 1½ inch	18 00@20 00
Culls " "	10 00@11 00
Shingles.	
XXX Pine	3 50@ 4 25
XX "	1 90@ 2 10
XXX Cedar	2 90@ 3 25
XX "	1 50@ 2 00
Lath 1¼ No. 1	2 00@ 2 25
" No. 2	1 50@ 0 00

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ₱ M	$53 00@58 00
Pine, fourths	53 00@58 00
Pine, selects	53 00@58 00
Pine, good box	22 00@33 00
Pine, 10-in. plank, each	00 42@00 46
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in.	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 21
Pine, 10-in. boards, 16 ft., ₱ M	28 00@32 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	16 00@18 00
Pine, 1-in. siding, select	43 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ₱ M	40 00@43 00
Ash, second quality, ₱ M	25 00@30 00
Cherry, good, ₱ M	60 00@85 00
Cherry, common, ₱ M	25 00@35 00
Oak, good, ₱ M	40 00@43 00
Oak, second quality, ₱ M	20 00@25 00
Basswood, ₱ M	25 00@30 00
Hickory, ₱ M	40 00@40 00
Maple, Canada, ₱ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ₱ M	38 00@40 00
Shingles, shaved, pine, ₱ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 4 75
" clear, "	0 00@ 3 25
" cedar, mixed	0 00@ 3 50
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ₱ M	0 00@ 2 75
Lath, spruce, "	0 00@ 3 00

CHICAGO.

The *Northwestern Lumberman* of July 26, says:—Since July came in the number of arrivals at this port have been less each week than during the weeks of June. The port list for the seven days ended Wednesday night showed 181 arrivals, a large proportion of which have gone through to the yard docks. Offerings at the market have been less in number than during a corresponding time last year. The condition of the market just now is not such as to encourage shipment from the mills as freely as during June. Lumber has dropped so low that the manufacturers dread a further decline, and prefer to hold rather than to risk overloading the maket. If the present condition should continue, while the mills were going on piling up lumber, it is difficult to see how a further decline of a quarter could be avoided. Indeed, some of the jobbers are waiting for just this result. Since it is difficult to get bank loans extended, and it is hard to discount paper, the merchants feel that they do not care to pile up lumber in advance of actual requirement, and the latter is not very pressing at present. A revival of demand in August or September will make some difference, but the extent of that cannot yet be determined, nor counted on much in advance under existing conditions. It looks now as if the market would have to drag for at least a month to come.

Quotations are as follows:

Piece stuff, green	$ 8 25@ 8 50
Long timber, green	10 00@10 50
Boards and strips—No. 2 green	9 00@11 00
Boards and strips Medium, green	11 00@13 00
Boards No. 1, green	15 00@18 00
High grade	18 00@24 00
Shingles, standard	1 75@ 2 00
Shingles, extra	2 00@ 2 20
Shingles, clear	2 80
Shingles, cedar	1 50@ 2 00
Lath	1 50@ 1 65

KALE FREIGHTS.

Grand Haven	$1 25 @1 37½
Muskegon	1 25
Whitehall	1 37½@1 60
Ludington	1 62½
Manistee	1 75
Menominee	1 62½
Oconto	1 75
Cheboygan	1 50
Alpena	1 75
Bay City	2 00
Tawas	2 00
Frankfort	1 75

Receipts of lumber, shingles, etc., for the week ending July 24, as reported by the Lumberman's Exchange:—

	RECEIPTS. *Lumber.*	*Shingles.*
1884	115,118,000	53,254,000
1883	123,231,000	82,440,000

FROM JANUARY 1, 1884, TO JULY 24, 1884, INCLUSIVE.

	RECEIPTS. *Lumber.*	*Shingles.*
1884	836,654,000	433,028,000
1883	768,768,000	531,478,000
Increase	67,886,000	
Decrease		98,450,000

LAKE RECEIPTS FOR THE WEEK ENDING JULY 24.

Lumber	795,874,000
Shingles	417,165,000
Lath	31,053,000
Posts	2,209,508
Railroad ties	671,592
Wood, cords	13,714
Bark, cords	12,061
Slabs, cords	19,541
Telegraph poles	103,675
Spars	12

STOCK ON HAND JULY 1.

	1884.	1883.	1882.
Lumber & timber	470,292,195	430,375,078	443,039,546
Shingles	295,843,825	246,987,650	223,839,500
Lath	46,889,385	43,612,922	26,691,152
Pickets	1,331,104	1,486,077	1,902,187
Cedar posts	297,545	409,258	154,143

BOSTON.

Cotton, Wool and Iron of July 26, says:—General business is reported to be very dull, with a full supply considering the limited call. There is a good deal of drumming for the little trade that is to be had, and prices in some cases rule in buyers' favor. The outlook for fall trade is rather uncertain as yet.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@25 00
Culls	12 00@14 00

TONAWANDA.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

GLASGOW.

The *Timber Trades Journal* of July 12 contains the following:—The past week's imports to Clyde include two cargoes of Quebec timber and two of pitch pine at Greenock; and at Glasgow, besides sundry imports of wood goods per steam liners, there have been arrivals of Nova Scotian birch timber and deals and San Francisco redwood.

A cargo of Mexican mahogany, which is also included in the import list for the past week, is advertised for public sale in Yorkhill Yards on Tuesday next, 15th inst.

An auction sale was held here on the 8th inst., Messrs. Singleton, Dunn & Co,, brokers, the goods offered consisting of Michigan and Quebec pine deals; and birch and maple timber, but very little business was done.

Quebec 1st yellow pine deals—
12 ft. 8×3 2s. 4½d. per c. ft.
Quebec 3rd spruce deals—
10 to 13 ft. 11×3 10d. "
Russian birch—
About 9 in quarter girth 7½d. "

LIVERPOOL.

We learn from the *Timber Trades Journal* of July 12, that the monthly statistics of the trade show that a fair average amount of business has been done during the past month, though there is little doubt when profits have been made they have been confined to the barest margins.

Freights continue very low, and with a considerable quantity of steam tonnage pressing upon the market there is little hope of any advance upon present prices being obtained.

Very few cargoes of St. John, New Brunswick, spruce have come to hand during the past week, but several cargoes from Nova Scotia ports have arrived; most of these, however, have been already disposed of before arrival.

There is no change in prices, the present intention of the importers being to store future cargoes rather than force them upon a reluctant market, and so weaken prices below their present limit.

LONDON.

The *Timber Trades Journal* of July 12, says: This week we have to record nearly 100 vessels, wood-laden, to the docks, and 65 in last week's *Journal* makes a pretty big total for the fortnight; hence the probability is that at the end of the season the stocks in the docks will be much heavier than they were last year. The alterations made in the "Baltic" saleroom this year no doubt have afforded additional accommodation, and to this in some measure may be due the absence of that crowded appearance we used to notice on Messrs. Churchill & Sim's sale days; but still we cannot help thinking that the numbers recently attending have been much below the average. We also miss the usual crowd that in the ordinary way, when anything like a big sale is going on, generally congregate in the vicinity of the saleroom. One or two loiterers we noticed on Wednesday and Thursday last, but no signs of bustle were apparent amongst the few members of the trade that had assembled.

AUSTRALIA.

The monthly circular of Messrs. Lord & Hughes, timber brokers, dated Melbourne, 2nd June, 1884, contains the following:

The amount of business done in timber and building materials since the date of our last issue on the 5th ult., has not been equal to that of the previous three months; still, for this, the dull season of the year, deliveries from yards for consumption have been fairly active.

Auction sales have been principally confined to Oregon timber, Norwegian flooring, American lumber and Kauri pine, and the prices obtained show a slight improvement on last month's rates.

Stocks of every description are very large, and if augmented by heavy arrivals, lower prices must necessarily be expected.

The arrivals have been—Mandalay, from Burrard's Inlet, with Oregon timber, laths and pickets; W. H. Besse, from Boston, with white

pine shelving, T. and G. ceiling, clear pine, spruce deals, doors lath anp plaster; Loch Ryan, Marsala, Parramatta, Sussex, Duchess of Argyle, Potosi, Knight of the Thistle, Loch Torridon, Angerton, Drumeltan, Beecroft, Gulf of Venice, from Great Britain, with flooring, slates, lead, galvanizd iron and cement; Waitemata, Killarney, and Jules Marie, from Kaipara, with Kauri pine; Nemesis, Wendouree, Leura, Gabo, Konoowarra, and Buninyong, from Sydney, with cedar: Claud Hamilton and Adelaide, from Adelaide, Wendouree, from Sydney, with slates.

RED DEALS.—Imports: Nil. Since our last report there have been neither arrivals nor sales at auction with exception of a line, door rails.

SPRUCE DEALS.—Imports: 485 pieces. This parcel arrived in W. H. Besse, and was sold at auction on 30th ult., 11x3 realizing 3 1-16d., and 9x3 3d., at per foot of 9x3. The only other public sale has been parcel ex Leading Wind.

OREGON TIMBER.—Imports: 533,032 feet super. The only arrival has been Mandalay, the cargo of which was sold at auction on 20th ult. at prices ranging from £6 7s. 6d. to £6. The balance of cargo ex Corsica has also been quitted at £6 5s. to £6, besides which we have to report sale privately of cargo ex Osceola, at a price withheld.

LUMBER.—Imports: Clear pine, 136,341 feet super; white pine shelving, 165,190 feet super; T. & G. Ceiling, 18,132 feet super. The only arrival has been the W. H. Besse, from Boston, and this consignment was offered at auction on 30th ult., when nearly all the clear pine and a portion of shelving was sold. Clear pine shows a slight improvement on previous sales.

PITCH PINE.—Imports: Nil. Auction sales. —Nil.

REDWOOD.—Imports: Nil. On the 6th ult. the shipment, ex Kylemore, was offered at auction, when about one-half was sold at £10 per 1,000 feet super.

FLOORING AND WEATHERBOARDS.—Imports: 622,800 feet lineal. The arrivals have been—Loch Ryan, Duchess of Argyll, and Loch Torridon, from Great Britain. Sales by auction have been—Ex Vladimir, Edouard, Kamfjord, Hans Gude, Helene, Amalfi, Loch Moidart, Loch Lomond, and Loch Ryan. The following are prices realized:—Red, 6x1⅛, 11s. 9d.; 6x⅜, 6s. to 5s. 9d.; 6x½, 4s. 10d. to 4s. 9d.; 4-out weatherboards, 6s. 6d.; white, 6x1⅛, 9s. 3d. to 8s. 9d.; 6x⅞, 8s, to 7s 9d.; 6x⅜, 5s. 6d. to 5s.; 6x½, 4s. 9d. to 4s. 6d.; 4-out weatherboards, 6s. 6d. to 6s. 3d.

KAURI PINE.—Imports: 795,221 feet super. The arrivals have been Waitemata, Killarney, Jules Marie, from Kaipara. Sales by auction have been—ex Vivid, Davenport, Waitemata, Palace, Peerless, Robin Hood, Jules Marie, L'Avennire, and Killarney, hewn logs realising 11s. 9d. to 11s. 3d.; sawn flitches, 16s. 3d. to 14s. 3d.

CEDAR.—Imports; 101,334 feet super. Sales by auction have been made during the month of logs at 52s. 6d. to 19s., according to size and quality.

DOORS.—Imports: 873. The arrivals in the W. H. Besse, from Boston, and were offered at auction on 30th ult., when all but one line were sold.

LATHS AND PICKETS.—Imports: Laths, 9,458 bundles; pickets, 3,556 bundles. Sales by auction have been made during the month of Oregon laths, 4½ feet, at 36s. 6d. to 36s.; spruce 4½ feet, 35s.; pine, 4 feet, 32s. 6d.; Baltic, 4½ feet, 24s. to 21s. Pickets; Oregon, 4½ feet, at £8 15s. to £8 10s.

SLATES.—Imports: 182,036 pieces. The arrivals have been Duchess of Argyll, Drumeltan, Beecroft, from Great Britain; W. H. Besse, from Boston; Claud Hamilton and Adelaide, from Adelaide, and Wendouree, from Sydney. The only sale by auction of slates has been a portion of shipment ex Star of Scotia, 20x10 Blue Bangor realising £11 12s. 6d. to £11 10s.; 20x10 Vermont unfading green slates, at £12.

PLASTER.—Imports: 200 barrels. Sales by auction have been, ex Star of Scotia, Knickerbocker, at 12s. 3d.; ex W. H. Besse, Albert plaster (large barrels,) at 14.

CEMENT.—Imports: 5,688 barrels. In consequence of heavy arrivals and large quantities to arrive, the market is weaker. Sales of best brands have been made at 14s. 6d. to 15s. 6d.

GALVANISED IRON.—Imports: 1,265 tons. Privately, sales have been made at, for best brands, £20, inferior, £19 10s. to £18 10s.

EXPLANATION.—Red deals and spruce deals are sold at per foot of 9x3; T. and G. flooring at per 100 feet running; Oregon timber, redwood, clear pine, shelving, ceiling, per 1,000 feet super; Kauri pine and cedar logs at per 100 feet super; laths, pickets, and slates at 1,000 pieces.

THE CHOLERA AND THE TIMBER TRADE.

We have in previous numbers shown that the formerly despised timber-carrying trade, was now attracting shipping of the highest class, and in fact was getting into more esteem than the corn trade, which used to take all the good-class ships away from it. What then will be the natural consequence of this Mediterranean scare? Why, that the timber trade, from its wholesome and totally unsuspicious character from a sanitary point of view, will become more popular among owners and commanders than ever it was before, the only trade almost that it will be safe to charter in, to be sure of escaping quarantine, and the result will probably be that, low as freights are now, it will be next to impossible to establish any rise between this and next spring. That they cannot be lower we have evidence in the quantity of shipping laid up for want of employment, and a very uncumfortable fact it is to reflect upon. In the northern shipbuilding and loading ports it is stated that "the streets are crowded with unemployed men, who are gradually falling in that listless way of standing about which is so significant to those who have lived much in induatsial centres during times of depression." In Middlesbrough also, which was such a thriving place even two years ago, thousands are said to be out of employment, and sailors in every port are looking for berths in vain.—*Timber Trades Journal.*

THE NEW ORLEANS EXHIBITION.

The buildings for this gigantic exhibition are now being rapidly pushed forward. The exhibition promises to surpass in size that of the Great London Exhibition of 1862, as well as the recent Centennial Exhibition, in the number of its exhibits. The London buildings of 1862, which up to that time was the largest exposition structure ever erected, contained 1,400,000 square feet. But the main building at New Orleans will contain 1,656,000 square feet, requiring 9,000,000 feet of lumber, 4,500 kegs of nails, and 5,000 boxes of glass, in its construction. It will be 60 ft. high, with a tower 115 feet, and it will have a music hall in the centre with a seating capacity of 11,000. To light the building there will be 15,000 incandescent lamps, and the steam required for the whole structure will be upwards of 3,000 horse-power. The horticultural hall is a handsome structure, 600 feet long by 104 feet wide, with glass roof and glass tower 60 feet high. This will form the largest conservatory in the world. It is intended to arrange around the sides specimens of the choicest plants from Mexico, Central America, Florida, California and all parts of the United States and Canada, and a special commissioner will visit Europe for the purpose of securing specimens of fruits and plants in order to make this display international in character. The centre of the hall will be devoted to an international fruit display, presenting 20,000 varieties. This is nearly double the quantity of any previous fruit exhibit. There will also be an art gallery. About 1,000 men are engaged on the work of the main buildings, which will be ready for the reception of exhibits in August next.—*London Times.*

The Adams Tobacco Company.

A new feature in the tobacco business has been developed by the Adams Tobacco Company, who have within the last two months exported several thousand packages of their goods to Spain via Gibraltar. This tobacco, it appears, is so well liked in that country that the company now has orders which will keep the factory busy for several months, in consequence of which they have had to increase the number of their hands.—*Tobacco Leaf, New York, June 28, 1884.*

Ireland to Produce Lumber.

The London correspondent of the Toronto *Mail* says:

Mr. D. Howitz, Forest Conservator for Denmark, has made an examination of the resources and the need of Ireland for forest cultivation. He finds that five million of Ireland's twenty million acres are waste, and might be planted with a reasonable certainty of profit. These lands, he says, would grow valuable timber, instead of the commoner and cheaper kinds. The list of available trees includes 36 conifers, 38 deciduous and hardwood species, and eight sorts of bushes. Mr. Howitz has drawn up from personal inspection a scheme for planting a hundred thousand acres every year for the next thirty years. Should the idea of Mr. Boppe as to Scotland, and Mr. Howitz as to Ireland be put into practice, Canada, in a few years, will have to find a lumber market elsewhere than in England, provided she has not by that time so extended her industries and increased her population, as to cause a large home demand for the products of the census. The condition of affairs at present, and the outlook in the future, seem to point to the necessity of creating a home demand.

Resources of the Father Northwest.

In commenting on the enormous cost of the Northern Pacific railroad, the San Francisco *Chronicle* says: "When it is reflected that California produces full one-tenth of all the wheat of the country, and more than one-fifth of the wheat exports, and that we do this with an area of not more than 3,500,000 acres planted in wheat, and that Washington and Oregon have three times as many acres better adapted to wheat than ours, and that within the railway belt of the Northern Pacific, we begin to form an understanding of the future agricultural possibilities of our northern neighbors, whose resources in coal, iron and lumber are even greater than in the cereals. Given a shipment terminus on the deep waters of the Puget sound equal in facilities for large ships with those of San Francisco, and it needs on prophetic mind to foresee the creation of a city there within the lives of its young men which will, in its exports and imports, reach the magnitude of our own."

Two Hundred Schooners' Masts.

The Steamer "Storm King" left City Island, near New York, on Thursday for Boston with a raft of pine spars, intended for schooners' masts. The lot consists of some 200 sticks, worth $150 each; total value, about $30,000. A dozen or more are chained together through holes bored near the ends; then follow as many more in the same way until all are in line. A speed of about three miles per hour seems to be about all that can be made. An extra towboat cannot double it. The raft will pass down Vineyard Sound Shoals to Monomoy Point, Chatham, where good weather and smooth water are waited for, if necessary, in order to successfully proceed around Cape Cod.

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One 10 " "
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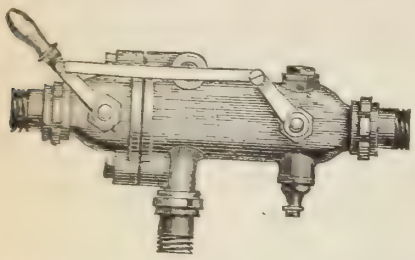
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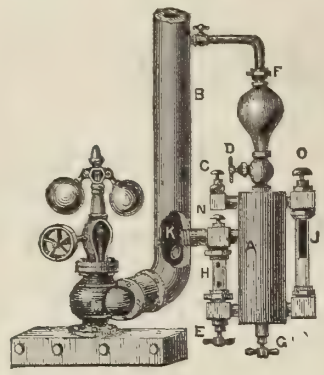
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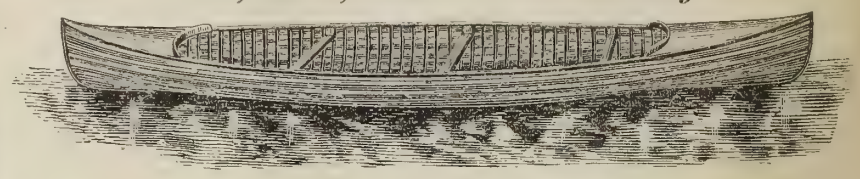
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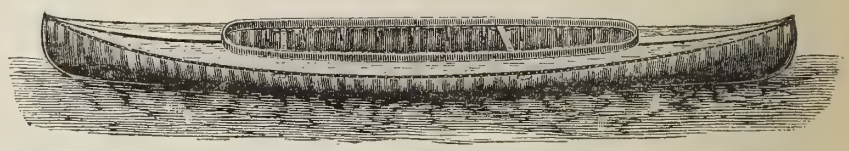
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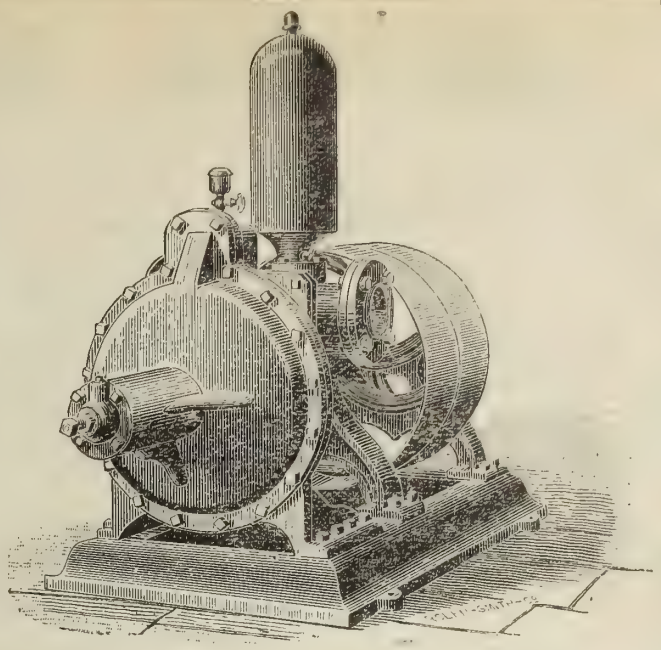
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A. NORMAN, ESQ., OTTAWA, September 3rd, 1883.
DEAR SIR,—I have experienced considerable benefit from your Appliances. I feel stronger and better every way. Yours truly, R. E. HALLIBURTON.

A. NORMAN, ESQ., PETERBOROUGH, October 15th, 1884
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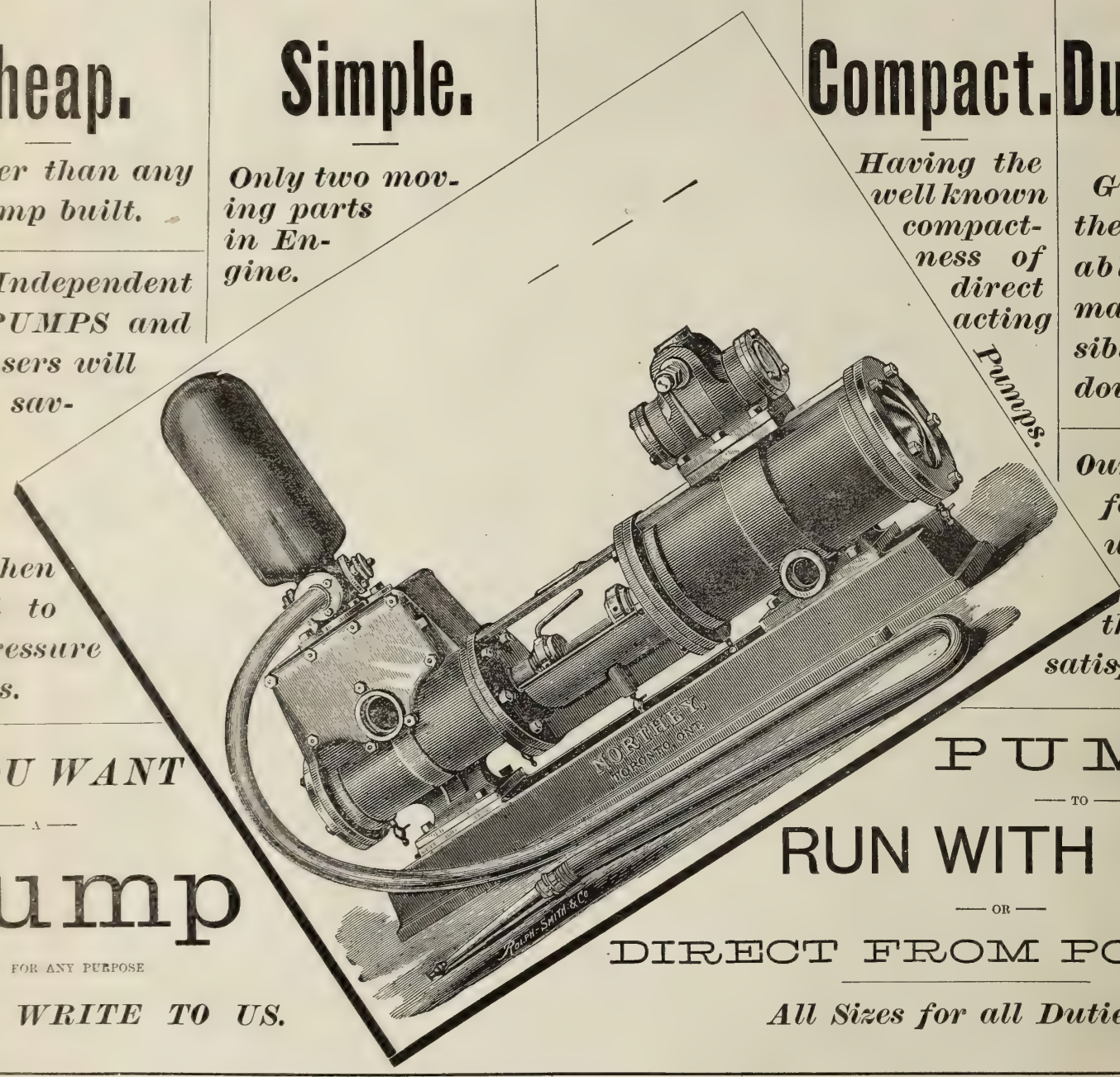
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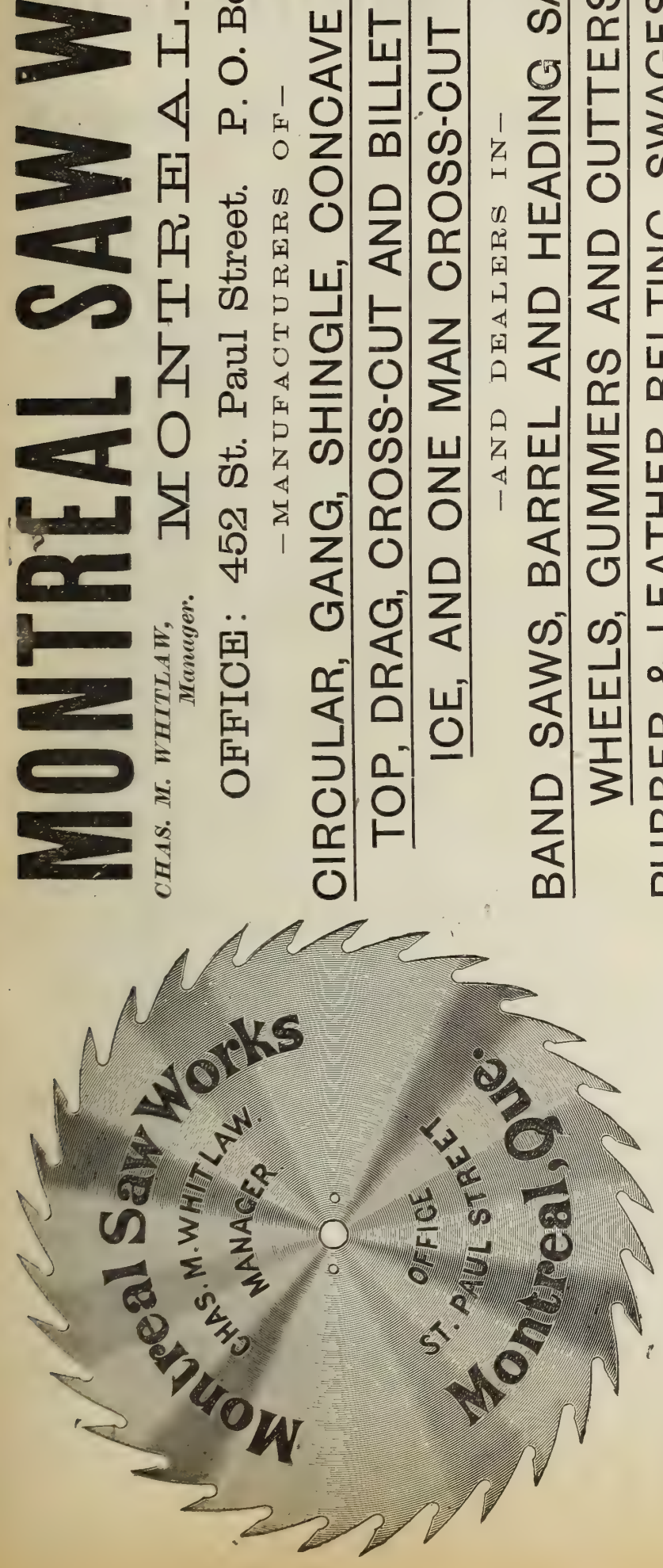
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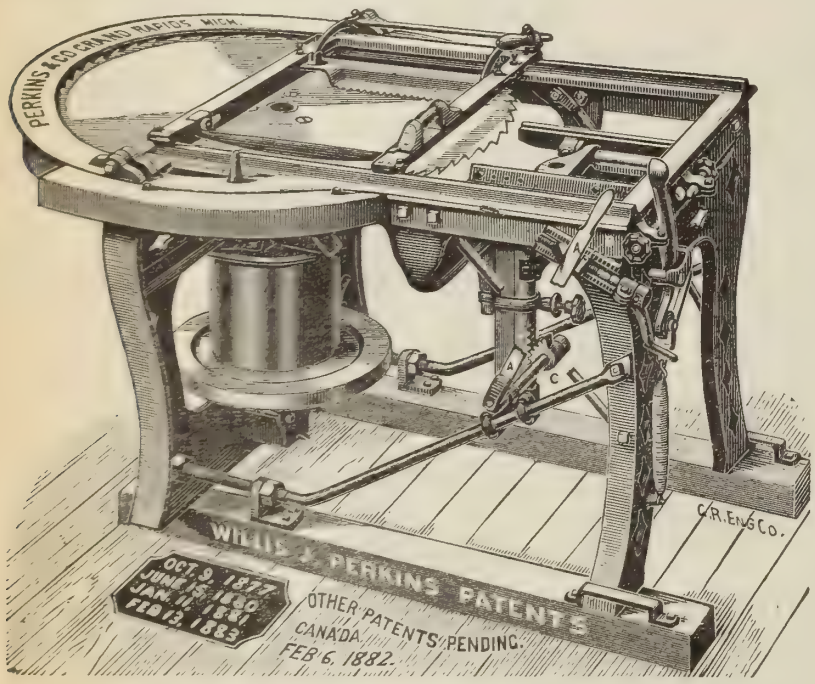
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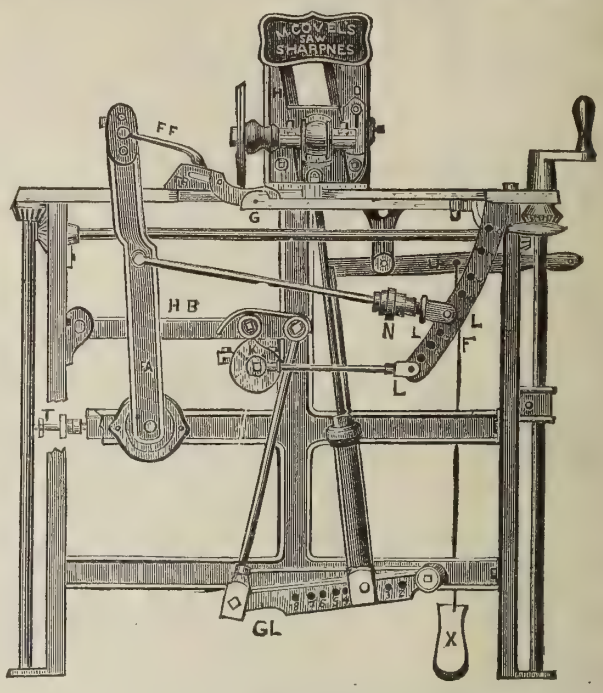
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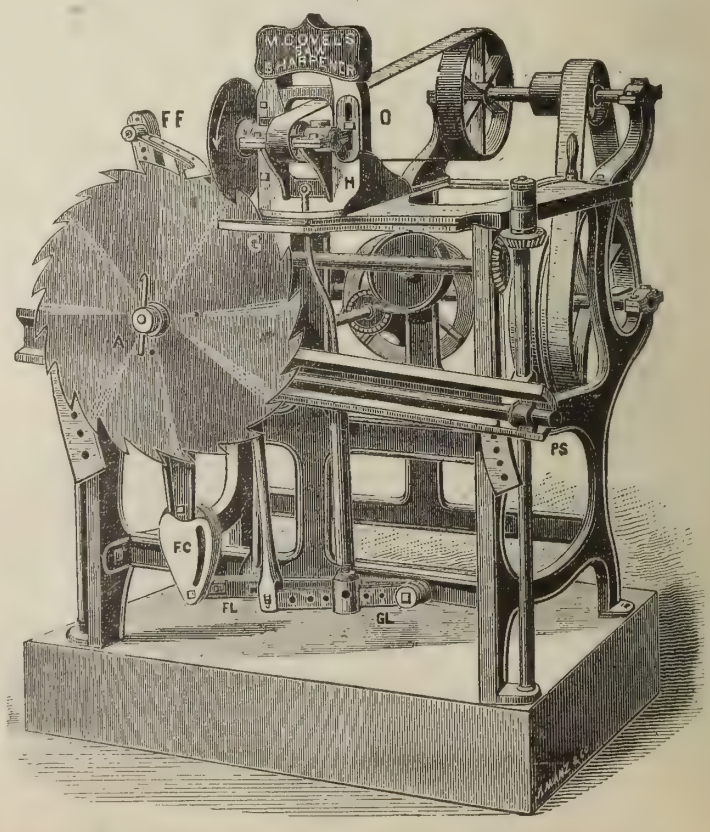
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VOL. 4. PETERBOROUGH, ONT., AUGUST 15, 1884. NO. 16.

FORESTAL EXPERIMENT STATIONS.

The following is a part of a paper entitled "Our next problem," read by Adolph Leue, Secretary of the Ohio State Forestry Association, at the Convention of the Ohio State Forestry Association, held in Cincinnati, April 25, 26, 27, 1883:—

The great importance of exact experiments in Forestry, was felt by two German foresters, Hundshagen and v. Wedekind, as early as 1826, in which year the latter proposed the organization of a society for forestal experments, but, as the proposition was not sufficiently endorsed, it was dropped for the time being. Several subsequent attempts to institute comparative experiments failed, until 1868, when, on 31st of August, at a Congress of German foresters, held at Vienna, a committee, consisting of Gutav Heyer, Franz Bauer, Ernst Ebermayer, Fr. Fudeich, and J. Wessely, was appointed to consider the question: On what plan such forestal experiment stations should be organized. This committee met on 22nd of November of that same year, agreed on a plan of organization, and questions to be subjected to investigations and experiments. The report was adopted by the German Foresters' Congress, and submitted to the several governments, which were to bear all the expenses of these stations.

The first station was organized in Baden on 16th April, 1870—Saxony, Prussia, Wurtemberg, Austria, Bavaria, Brunswick and Hesse, followed in the order mentioned. The stations in all of the just named states, with the exception of Austria, which has an organization of its own, have formed a union called "The Association of the German Forestal Experiment Stations."

The great aim of those stations is, to furnish a scientific foundation for a rational management of forest, based upon exact experiments and careful investigation. They are intended to determine the significance of forests in the economy of nature, to try the various methods of forest management, to examine the advantages which one method may have over another, and, finally to establish a plan of forest administration, which will enable the owners of forests to realize the greatest possible profit from forests, and at the same time reduce the expenses of their administration.

Among the many problems to be solved through the agency of these stations, are the following: to determine the influence of forests upon soil and climate; to investigate the relative value of the several methods of thinning; to establish reliable tables of increase, and methods of valuing forests; to study the foes of the forest, both animal and vegetable, and to devise means of successfully combating them; to determine the value of forest litter upon the growth of trees; to test the relative value of forest implements; the devise new methods of obtaining forest products, and to find new uses for the same; in short, they are intended to furnish the means by which to increase the wealth of the owners of forests, and thus that of the entire country, and to furnish legislative bodies with the foundation necessary for a just taxation of forests, and for a wise and beneficient code of forest-laws.

To fully appreciate the thoroughness of manner in which the work of solving these problems is performed in Germany, a glance at the organization of the Forestal Experiment Stations in that country, will be of some advantage.

These stations are State institutions, connected with schools of Forestry.

In Prussia, with the Forest Academy at Eberswalde.

In Bavaria, with the University at Munich.

In Saxony, with the Forest Academy at Tharandt.

In Wurtemberg, with the University at Tubingen.

In Baden, with the Poletechnicum at Carlsruhe.

In Thusingia, with the School of Forestry at Eisenach.

In Hesse, with the University at Giessen.

As all these stations are, with only some immaterial differences, organized on the same general plan, and as the examination of but one will answer our present purpose, I would now ask your attention to the organization of that in Prussia:

According to an ordinance issued by the Minister of Finance, on the 14th of March, 1872, the Forestal Experiment Station of Prussia was organized, and connected with the Forest Academy at Eberswalde, and placed under the control of the Central Forestry Division of the Ministerium of Finance. This station consists subjectively of five divisions, namely: a forestal, a chemico-physical, a meteorological, a vegetable-physiological, and a zoological; locally it consists of the chief station at the Forest Academy, and a number of secondary stations in appropriate Chief Forest apportionment. The chief station embraces all of those five divisions, while the secondary stations have either a forestal and meteorological, or only one of them.

The general superintendence of the experimenting is vested in the director of the Academy, who acts as Commissary of the Central Forestry Division. He makes all the estimates of the expenses for experimenting, and, after due consultation with the chiefs of the several divisions, determines what experiments are to be undertaken and how they are to be made. At the end of the fiscal year, he submits, in an annual report to the Central Forestry Division, the results of the work done at the station.

Each of the afore-named five divisions has its chief, whose only duty is to carry out the work assigned to his division. Yet, according to the magnitude of the work, he has one or more assitants.

The secondary or sub-stations, which are unlimited in number, are under the direction of the chief forester, in whose division they are located. The importance of these sub-stations can not be estimated too highly. The problems assigned to them are, as a rule, of an exceedingly great practical value to practical forestry. In order to obtain reliable results, only the most competent and conscientious of the Chief Foresters are selected for making the experiments, which are performed after certain definite plans.

The expenses of maintaining the Experiment Stations in Germany, vary greatly, but always in proportion to the forest area of the respective State. For the year ending 1882 the expenses of the

Station in Prussia, amounted to 27,000 marks—$7,750.

Station in Bavaria, amounted to 44,000 marks—$11,000.

Station in Saxony, amounted to 14,000 marks—$3,500.

Station in Wurtemberg, amounted to 7,000 mark—$1,500.

The entire amount of money expended for the maintenance of Forestal Experiment Stations in Germany, amounts to about $30,000 annually.

These stations have, as already stated, formed an association whose great aim is to facilitate the objects of expermental forestry, by joint plans of experimenting, by a proper division of labor, and by publishing the compaaative results. The business management of this association has been confided to the Station at Eberswalde.

I cannot dismiss this subject without having alluded to the plans of labor, or the manner in which the experments are conducted. A detailed account of these experiments would lead too far; I shall therefore confine myself to the main features of but two.

Experiment with Forest Litter.—The aim of this experiment is to determine the objective value of forest-litter, and its value to the growing forest. In order to obtain reliable results, the experiment is now being made at a number of stations in various parts of Germany. A tract of a forest section of five acres, stocked with only one kind of trees, which are all of the same, or nearly the same, age, is selected. This area is divided into five equal parts, which are laid out in squares.

From part I., no litter is removed.
" " II., litter is removed annually.
" " III., litter is removed every 2nd year.

From part IV., litter is removed every fourth year.

From part V., litter is removed every sixth year.

This process is continued for a period of about fifty years. The object of this method is: 1. To ascertain the exact quantity of litter which one acre produces, which is done by actually weighing it, first at the time when taken from the ground, and then when it is perfectly dry. It then sold at market price, and the amount obtained credited to that part of the experimenting area from which it was taken. 2. To ascertain the influence which the removal of litter has upon the increase of wood, which is determined by a repeated accurate invoice of the growing wood.

The significance of litter to the growing forest has long been felt, but never before in the history of Forestry, has this question been subjected to so rigid a process of investigation, which is certainly well calculated to settle the forest-litter problem.

Experiment in Thinning.—Though we in this country have practised thinning to an alarming extent, it is nevertheless a subject on which we are badly in need of more light. With a few exceptions, the American idea of this part of forest management has been very ruinous to our country, in that, in many instances, it has left nothing that could remind us of a forest, except stumps of trees and a barren soil

The object of experimenting in this part of forest management, is to determine the influence of the various modes of thinning upon the growth of individual trees, and to find out the difference in the production of wood. An area of about three acres is selected, and divided into three equal parts.

In part I., only the dead trees are removed.

In part II., also the defective are removed.

In part III., every tree that does not keep up with the average growth is removed, so that in this part none but choice specimens are met with.

In newly formed plantations the process of thinning is repeated every fifth year, and later every tenth year. In forests consisting of oaks, or beeches, or pine trees, the experimenting period lasts fifty years, while but forty years are required for the softer kinds. An accurate record of the quantity of wood obtained at the different thinnings of each section is kept. After each thinning an invoice of the remaining trees is taken, and recorded. At the expiration of the experimenting period, when the final invoice is made, the most profitable mode of thinning must appear.

Other questions in forestry are treated in the same thorough manner, and the results obtained thus far are very satisfactory, so that those Forestal Experiment Station are constantly growing in public favor.

There is one thing about a house which seldom falls, but never hurts the occupant when it does—that is the rent.—*Texas Siftings.*

THE TIMBER TRADE OF AMERICA.

Prof. Rothrock, of the Pennsylvania University, in speaking of the danger of a timber famine, says that the area of the United States, including Alaska, is 2,306,560,000 acres. Of this, it is stated officially, 380,000,000 are in woodland chiefly belonging to private parties. In other words, taking our area as a whole, we have about 16½ per cent. remaining in forest growth. Of this, we must remember, that a large proportion represents lands which have been cut over, and are now covered with immature growth of good timber, or with trees of such kind as have no commercial value. It will, no doubt, be surprising to learn that as a whole, Europe has 28 per cent. of its area remaining in forest. This, however, is very unevenly distributed, and, to be of further use as a point of comparison, we must examine into the timber statistics of each important district. The percentage taken in this are: Sweden and Norway, 40; Russia, •39; Austro-Hungary, 23; Germany, 23; Switzerland, 19; Italy, 17; France, 16; Belgium, 12; Spain, 11; Portugal, 6, Great Britain and Ireland, about 3. None of those countries which have less timber land than above 17 per cent of their total area have sufficient wood to get along with. They have to import. Making, as far as I can, due allowance, and testing my results by various standards, I am now prepared to assert that we are in danger of a timber famine at any time our forests fall below 15 per cent. of the entire area of the country. At this hour, so far as I can estimate, we have not more than 16·47 per cent. Thi gives 1·47 per cent. between ourselves and want, so far as our industries are concerned. Of all civilized countries driven to make the largest use of iron and to exercise the greatest economy in wood, Great Britain heads the list. Here then we might suppose there existed the greatest ability to dispense with it. Her importations of wood were valued at $77,963,399 a year from 1872 to 1876, or $2.50 worth for each soul per annum.

LEATHER BELTS.

This subject is again being agitated by mechanics and engineers, and has not yet been decided. It would seem most natural to run the flesh side next the pulley, and believe this is the more common custom, though there are many practical men who use their belts with the grain side next the pulley. The *Scientific American* says:

"There are some questions in practical mechanics that never appear to receive a final and authoritative solution under whatever tests. To this class belongs the question, which side side of a leather belt shall run on the pulley face? In some establishments both ways are practiced, and it would seem that under these circumstances, so nearly uniform, the matter might be at last decided. But the foreman or superintendent who prefers the flesh side to the pulley face holds that his belts last longer than those run by the other forman in another part of the establishment who turns his belts inside out. Of course prejudice has much to do in these cases, and probably prevents a fair conclusion."

A writer in a recent number of the *Journal of Railway Applianees* says: "I advocate running the flesh side to the pulley for the following reasons: Leather is fibrous and curiously constructed, as revealed under a microscope, in the form of a triangle, being very fine and delicate, whereas the flesh part, or bottom of the triangle, has a coarser and thicker fiber, and if it is properly skived will be just as smooth as the grain, although a great deal tougher, and will, therefore, stand more wear and friction. If you will notice belts that have run grain to the pulley for any length of time you will find the grain cracked, and you wonder why. It is because you have subjected the tenderest part of the hide to the hardest usage; the friction has burned the grain, the burning brittled and hardened it; you can never restore it. If you let the flesh part do the work, the grain side bein elastic, it will bind the coarser fibrous parts and keep them together."

The principal proprietor of one of the oldest and most extensive manufactures of leather belting in the country recently declared himself as positively unequivocally in favor of running the flesh side to the pulley, as the result of more than thirty years' observation, and he offered, among other reasons, the quaint one that the belt run thus was in the natural position of the hide. Per contra, the superintendent of a large establishment, where heavy machine tools are built, runs all his belts grain side to the pulley faces, claiming a much longer life to the belts and a closer contact between belt and pulley faces. In his case, however, all the pulleys are of turned and and finished iron. And it is possible that all these disagreements on this question may arise from the difference in the materials of the pulley faces.

Wooden-faced pulleys are coming into use again, particularly for pulleys above twenty-four inches diameter, and leather-faced pulleys are very common. It is undeniable that there is a difference in the holding force of these differing faces, as there is in their materials.—*Dominion Mechanical and Milling News.*

NEW WOOD WORKING FACTORY.

A company was formed about a year ago at Elgin, Albert County, N. B., with a proposed capital of $10,000, for the purpose of establishing a wood-working factory. The locality is famous for the great variety and excellence of its hard wood, and, having railway connections, is especially adapted to the line of industry undertaken. The directors of the company are all local men whose names are: W. B. Jonah, J. W. Steeves, J. M. Layden,—Babkirk, D. M. Steeves, G. M. Killam, C. S. Horseman, Charles McGee During the last spring the site was selected at Elgin Corner, near the terminus of the Elgin Branch Railway. On this, building have been erected of the following ground dimensions: Main building 50x30 feet, with extensions 80x26; engine house 30x40; dry house 25x30. Steam power will be used. An engine of 80 horse power, with tubular boilers, made in the most substantial and improved style by the large firm of E. Leonard & Sons, of London, Ont., has been put in position and is a handsome piece of machinery. It is intended very shortly to make a commencement In manufacturing butter tubs of hardwood; carriage hubs, spokes, etc. The business will be developed into other lines, especially with a view to supply the English market. The two hundred shares of stock in the company have been nearly all taken up in the Parish of Elgin. This speaks volums in praise of the enterprise of the parish, which is of comparatively recent settlement. Elgin has been always a prosperous and progressive locality, and may be expected to make still more rapid advance when the new industry is once under way.—*Telegraph.*

HAVOC IN THE MAINE FORESTS.

The terribly destructive worms are again at work upon the juniper-trees, which already begin to present the same dead, dry appearance as they did last year—leaves, twigs, and even some of the bark, being devoured by the ravenous swarms of insects. In 1883 countless thousands of juniper and spruce trees in the northern Maine forests were attacked by this worm, and lumbermen were alarmed, while naturalists were puzzled. Whole townships of timber were almost destroyed by the pest in 1883. The trees were stripped of their foliage, and then the worms would bore in under the bark by hundreds, sapping the timber's vitality, and causing the whole growth to appear as though scathed by fire or suffering from a severe drought.

It was noticed that spruce suffered most where the growth was thick, and last winter all the smaller trees were culled out, so as to leave more nourishment from the soil and free air for the larger. Some scientific men recommended this, and others gave it as their opinion that the worms were generated in fallen and decayed trunks, thence issuing to attack sound trees, and claimed that the forests to be free from the scourage, should be weeded out and cleaned like a garden. Others still said that the advent of the worms was a natural advent, one to be expected, and that it would soon pass away. In cold weather the attack did cease, only to be renewed this summer. Many of the trees which were attacked last season are now dying. They put out green leaves in the spring, but the shoots were sickly, and now look dead and dry.

Maine's forests are extensive, but not inexhaustible under such conditions as now prevail. The axe makes a drain of 150,000,000 to 200,000,000 feet a year on Penobscot's banks alone, and probably 500,000,000 feet a year in the whole state, and cyclones have levelled whole townships of timber.

TREE FALLING BY DYNAMITE.

A cartridge of the explosive substance is placed in a channel bored directly under the tree to be operated upon, and when exploded the tree is simply forced up bodily and falls intact on its side. If this system works as well as it is reported to do, the tree is not fractured by the force of the explosion, and the wood at the base of the trunk can be utilized. An argument in favor of this method is that it brings up the roots of the tree, and thus dispenses with the tedious process of grubbing the roots of the felled timber.—*Mechanical World.*

Every lumberman will appreciate the convenience in handling timber after an artificial tornado or cyclone has left the trees in whatever direction they may fall, with the roots and a large quantity of earth intact, and left standing in the way of the teamester in skidding. Many of the lumbermen during the last season have seen a little too much of this haphazardness in forests, where the high winds have been paying their attention to tree felling at the cost of the owners of the timber. The lumberman, however, takes as much interest in felling a tree as in any part of the lumber business. The direction in which it must fall is carefully considered, and it is placed in the very spot intended by the skill of the chopper, without injury to the timber or a rooted stump turned up in the way of hauling. What would be gained by the wood at the base of the trunk would not pay for the powder, however tedious may have been the process of grubbing the roots of the felled tree.—*Cotton, Wool and Iron.*

MILL AND SKATING RINK FLOORS.

For about three years past there has been a growing demand for birch, beech and maple lumber for factory flooring instead of pitch or southern, pine formerly in use. There is now a very fair demand for birch, beech and maple lumber, and a number of large mills have used it in preference to the southern pine.

The lumber is claimed to be more durable than southern pine and will not sliver as that wood does when worn. It is also cheaper. A lot of floor boards of these hardwoods, dressed and kilndered, can be delivered at $28 per thousand feet, while southern pine flooring would cost from $33 to $34.

A considerable demand fo this hardwood lumber for flooring in roller skating rinks has also sprung up within the last two or three years. These rinks have become very popular, and there is hardly a New England town of importance which has not, or which will not soon have, one. As the wear on the floor is very great only the best lumber is used. The boards for this purpose are carefully selected and will command from $40 to $45. They are from 2½ to 4 inches in width, while the boards for mill flooring are from 3½ to 5½ inches wide. With the use of this flooring in skating rinks there has also arisen a considerable demand for it for dining rooms and hall ways, where it has to a great extent displaced the ash, chestnut and walnut, being from one quarter to one half less in price, and it is claimed, being full as durable. It is being used somewhat also in public buildings.

This hardwood lumber is obtained mainly from New Hampshire where there are large forests of these woods. There is considerable obtained also in Vermont. Up to its use for flooring, this class of timber was held to be of very little value and its main use was in the manufacture of clothes pins, pails, hay rakes, and a number of such miscellaneous articles. The timber lands on which it grew were valued mainly for their spruce and hemlock. The growing demand for hardwoods, however, has caused a considerable increase in the value of such lands. About all the mills in that section now have suitable facilities for the sawing, dressing and kiln drying of this lumber, while up to a few years ago very few of them touched it.

The business in this class of lumber has now become important, and is steadily growing. It promises to become very popular for flooring in hall ways, dining rooms, public buildings, &c., as its durability and cheapness become better known. Though its use for mill flooring is large and increasing, it is not claimed that it will drive southern pine out of the market. This hardwood flooring is not used in the Fall river and in the New York and New Jersey mills as the southern pine, coming by water freights, can be laid down about as cheap and, in some instances, probably cheaper. And again, the growing demand for the hardwoods will in time probably lead to an advance in prices. Of the three varieties maple is the best, but is not so plenty as the birch and beech, and in large lots they are sold together. The growth in the trade of this lumber has changed the almost waste lands of northern New England into timber lands of importance.—*Boston Commercial Bulletin.*

DEFENCES OF THE BUTTERNUT.

In the new world, however, the walnut family has been driven by its pressing animal foes to adopt far more vigorous and active defensive tactics. The great American forests, says Grant Allen in the *Popular Science Monthly*, are the very paradise of squirrels, and the numerous other rodents of the northern plains, to the screaming monkey sand the powerful billed parrots of the tropical South American jungles. Where enemies are so numerous and so persistent, only the very hardest and best protected nuts can survive; and so the nearest American representative of the European walnut is the butternut of Canada and the Northern States, a far more formidable and uncompromising mouthful to tackle than its easy-going old world cousin. The outer husk of the butternut resembles pretty well that of the walnut; but its very stony shell is extremely difficult either to pierce or to crack; the sharp ridges on its surface are naturally very baffling to the teeth of squirrels; and even when you have at last made a good hole in it, the inside can hardly be extracted in pieces of any bigness, because of the horny intervening ridges. This American walnut, in fact, is a far 'cuter and smarter form of seed vessel than its effete European relative. There is every reason to believe indeed, that the butternut is an advanced and improved descendant of the same primitive geological ancestor as the Greek walnut. Only, while the walnut has been standing still in peninsular Greece and Anatolia for innumerable generations, the butternut has been going ahead with true American impetuosity, inventing one new improvement or modification after another, till it has now attained to almost absolute perfection in its adaptation to its own peculiar walk in life.

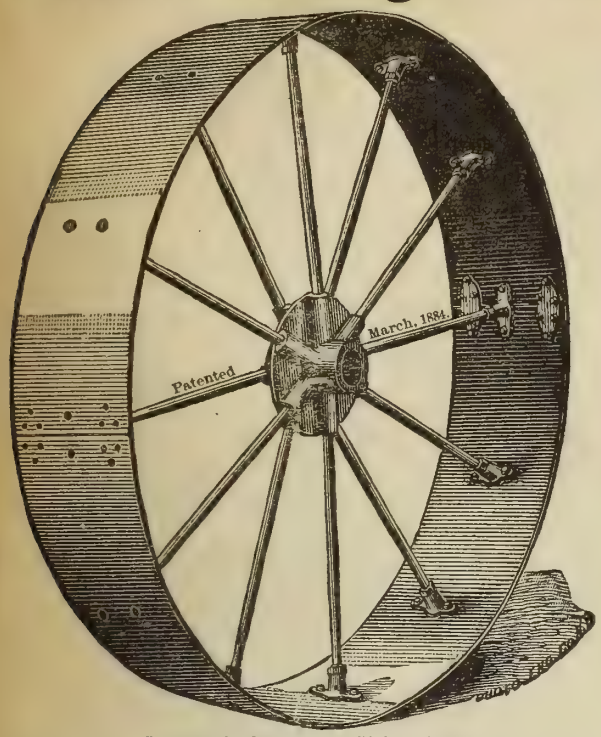
Sudden Activity in the Timber Trade.

The *Timber Trades Journal* of July 19 says: Following an exceptionally dull season, it is stated that during the past week great activity has been displayed at Sharpness Docks, which have presented an unusual sight both in the number and size of the vessels docked. Six steamers, representing a net tonnage of 7,200 tons and a gross tonnage of 11,000 tons, were discharging, and four others, which have been moored there for some time, making in all a tonnage of 10,863 tons net, and 16,754 tons gross. In addition to this there were several large sailing vessels in the docks. Amongst the steamers discharging was the Wydale, from St. John, with 47,305 deals, &c., for Messrs. J. Bland & Co.

Prospects of the Lumber Trade.

The stock of lumber at the mills and in the markets all over the Northwest is accumulating relatively faster than is healthy for trade under the current rate of distribution. Nobody is more sensibly aware of this than the manufacturers, as their proposition to close down in September shows. Much interest is manifested as to the result of the meeting in this city on August 20, but few anticipate that any considerable shutting down movement will grow out of it.—*Northwestern Lumberman.*

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SINGLE, DOUBLE or TREBLE ARMS.

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90 inch Pulley, 16 inch Face, Weight 615 lbs.
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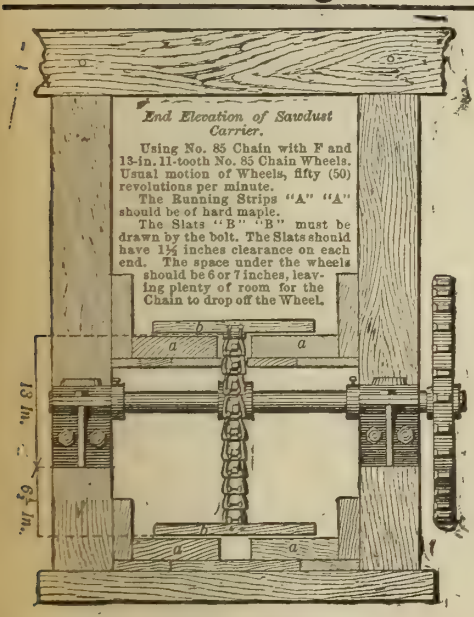
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60	feet,	13	inches	wide,	8	ply.	84	feet,	26	inches	wide, 8 ply.
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49	"	12	"	"	6	"	49	"	11	"	" 8 "
103	"	22	"	"	8	"	47	"	12	"	" 6 "
52	"	20	"	"	6	"	73	"	20	"	" 8 "
101	"	18	"	"	8	"	51	"	16	"	" 8 "
52	"	18	"	"	8	"	37	"	16	"	" 8 "
36	"	12	"	"	8	"					

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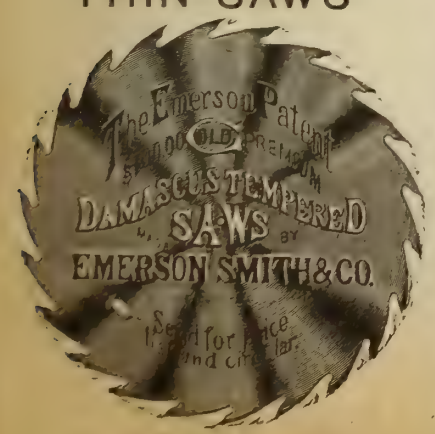
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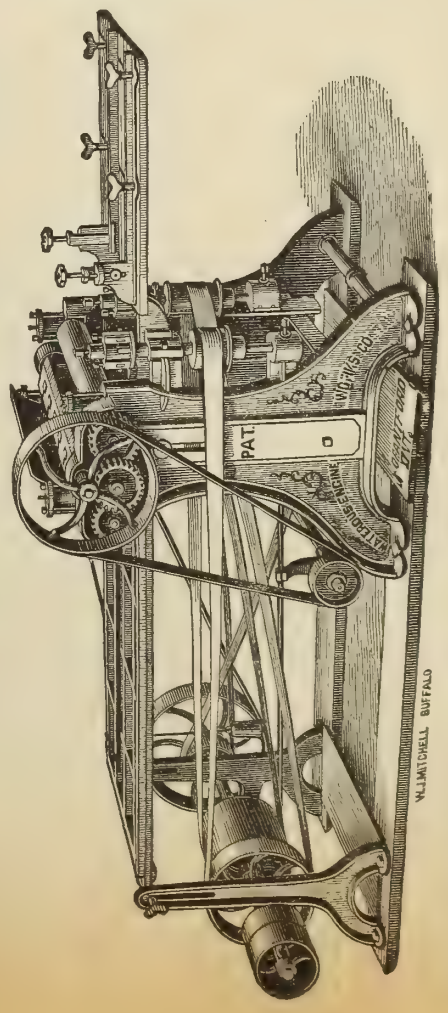
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No 1—Surfaces 24 in. wide to 6 in. thick. Planes and Matches 18 in. Wide
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BRANTFORD CANADA.

BURRARD INLET SAW MILLS.

A correspondent of the *Columbian*, writing from Granville, Burrard Inlet, states that the Moodyville saw mill, the largest in British Bolumbia, is owned and operated by a Company of that name. On account of temporary slackness in the lumber trade, the mill has been idle for the past six weeks, but is to start up again in a few days. It is run by a 600 horse-power engine, usually employing, when running to its full capacity, about 75 white men, besides a force of Indians and Chinamen, and has a daily average capacity of 85,000 feet. It has one 62-inch double circular, 1 edger, 1 scantling machine, 2 planers and 1 lath mill. Attached to it is a large machine shop, a blacksmith's shop, and a millwright's shop. The company send out annually about 26 vessels laden with lumber, taking with them 12,000,000 feet rough, 2,000,000 feet dressed, 340,000 feet pickets, 54,000 bundles of lath, and nearly 600 spars. The spars go to England, the balance of the export to South America, Australia and China. The company run six logging camps, averaging 25 men each, and each camp averages 20,000 feet of logs per day. It also runs a comfortable and exceedingly well-managed hotel, besides a large cook-house for the workmen and a general store.

The Hastings saw mill is owned and operated by a company of that name, and, next to that of Moodyville, the largest in the country, is run by four separate engines. It has one 62-inch double circular, edger, lath mill and a gang. Attached are a machine, blacksmith and millwright's shop. The mill employs about 60 men, besides a foree of Indians and Chinamen, and has a daily average capacity of about 75,000 feet. The company last year sent out 23 vessels laden with lumber, taking 13,000,000 feet rough, 2,000,000 feet dressed, 192,000 feet pickets, and 4,500 bundles laths. The total export went to South America, Australia and China. The company also runs five logging camps, in each of which are employed about 25 men; also, a general store and a large cook house, for the company feeds and lodges nearly all its employees.—*Victoria, B. C., Standard.*

THE WORLD'S HARVEST.

Harvest prospects and the prices likely to rule are two things on which, in this country, much depends. The harvest will probably be good in Ontario, and the area sown in Manitoba justifies the expectation of a large aggregate increase in the amount of wheat for export.

Prices of wheat will depend upon the total production of the world relatively to the demand, the rates of freight and the quantity left over from last year's crop. In Europe the price of wheat is nearly as low as it has been at any time within a century; and it is the more remarkable that this occurs a few weeks before the new harvest, a time when prices are generally above the average of the year. Even before the average price can be reached, there will be much leeway to be made up. It is too soon to ascertain what the prospect of the world's crop will be; the indications are that there will be a full average, and it is certain there is a tendency to increase exportation from certain countries. The wheat exporting countries of previous years are meeting new and more formidable competitors. Of these India is the most powerful, with, apparently, great possibilities of increase. The Australian wheat crop, by this time harvested, is reported to be much above the average. In Great Britain the prospects are that the year's crop will be better than that of 1883, and France is expected to produce an average crop. From Germany, Denmark, Holland, Belgium and Italy, only unfavorable weather between now and harvest can reduce the yield below the average. Egypt and Morocco are assured a full measure. From Austro-Hungary and Roumania come whispers of damage to the crops; and in Russia the prospect varies, in different localities, but on the whole seems to be good.

Stocks in Europe are believed to be large for this time of year; and in India there remains a good deal of wheat to come forward. Only a deficient harvest, of which there is no sign, or an extraordinary demand, of which appearances do not favor the expectation, could cause any material increase in prices. There is no question that, relatively to the demand, there has been an increase of production. The extra competition has been much felt by European agriculturists, where land is dear and rents high. The complaint is made that much European wheat has been sold below the cost of production. If this be true, the production of wheat for exportation, in countries outside of Europe, is determining the price at the centre of consumption. But wheat cannot long be sold below the cost of production, though the cost of production may be lessened by a lowering of rent; otherwise, the growing of wheat on soils where it would not pay the cost of raising, must cease. If this should happen, there would be a tendency for prices to recover, by contracting the circle of competition.

The reduction of freights, which has been carried to an abnormal point, favors the European consumer and the distant producer, at the expense of the European farmer. Cheap freights enable the American, the Indian, the Russian, and other producers, to place wheat in London and Paris, at lower figures. But in all the exporting countries the competition has been keen; it has been said that many of them have been sending their surplus wheat to Europe, at prices which do not cover the cost of production. This somewhat startling averment needs confirmation. If true, it shows a state of things which cannot last; no country can long afford to sell wheat below cost; wheat culture would, if the price did not cover cost, have to be diminished out of Europe as well as in Europe, until the equilibrium was restored. The carriers of the wheat, sold below cost, are said to have been working without profit; and if so, this is a state of things which must right itself. The building of new vessels must, in such a state of things decrease. This has actually happened, and, on the supposition that the facts are correctly stated, a diminution of tonnage must be brought about by the natural process of wear and tear. But some exaggeration may be suspected in the statement that part of the world's tonnage engaged in the shipping of wheat has latterly been altogether unproductive. Still, if not absolutely true, it is very near the truth. Great Britain is reported to have a surplus carrying power of three millions of tons; hundreds of vessels, steam and sail, are unable to find employment on any terms.

Are, then, the Malthusian laws being repealed? It is true that population nowhere presses on the means of subsistence, and that the fact of a superabundant production of wheat places an abundance of food within the reach of all? Unfortunately it is not true. Take an example from the facts before us. The excess of tonnage throws shipbuilders out of employment, and men without wages, in a time of plentiful crops and low prices, are liable to suffer the pangs of hunger. The pressure of population on the means of subsistence is not universal—it never is—the contact is confined to certain points, which are, according to circumstances, more or less numerous. In the midst of the greatest abundance there will always be men without the means of buying food.

The present is a period of transition, which must lead to a readjustment. If it be true that in Great Britain, France and Germany, wheat is being grown at a cost which prevailing prices do not cover, and if the same thing is happenning in wheat exporting countries outside of Europe, the loss cannot be long sustained; where rents do not come down in Europe, wheat lands must go out of cultivation; and out of Europe something that will pay the cost of production must be grown instead of wheat. This diminution of culture would of itself raise prices. The world's production of wheat can never, for any length of time, exceed the consumption. If production was greatly increased, additional mouths would come into existence to restore the equilibrium. Starvation freights are already regulating themselves. When the transition period, through which we are passing is over, things will, through a readjustment in harmony with the new conditions resume a normal condition.—*Monetary Times.*

A SEARCH WARRANT.—If there is any lurking taint of scrofula in the system, Burdock Blood Bitters are warranted to search it out.

THE POWER OF NIAGARA FALLS.

To any one who is interested in mill privileges where low water is unknown and the hours of use unlimited, the discussion of the possibilities of using the power of the falls of Niagara as given in a paper read before the American Society of Civil Engineers, recently held at Buffalo, N. Y., must be very entertaining. The author detailed the flow of the river at 275,000 cubic feet per second; falls along the rapids, 65 feet; height immediately at the falls, 165 feet. From these data it will be seen that the total horse power reaches nearly 7,000,000. To make use of this enormous power by water wheels, in the estimate of this engineer, would require a plant representing a cost of $5,000,000,000, which represents the amount of power that is thrown away by the neglect of the energy of the falls. The possibility of using this enormous power by transforming the same into electrical energy, and then transmitting it for use in distant quarters, must have afforded a very interesting discussion. The power now in use from the waters of the Niagara is taken in a canal accross the peninsula upon which the village of Niagara Falls is built, taking the water at the extreme point of the rapids and delivering it into the river below the falls, making use of the entire head amounting to 230 feet. This canal is nearly one mile in length, 35 feet wide, with a depth of about ten feet. A large number of factories are now distributed along the banks of the river taking the water from the canal and discharging over the sides of the precipice. The water wheels are set under heads from fifty to one hundred feet, and are capable of developing among the largest from 1,000 to 1,500 horse power each. This, together with a small overshot wheel under a six foot head on the Canada side, represents the extent of the use that is being made of this gigantic power at the present time, unless the race-ways at Goat's Island and along the mainland are to be taken into account where at least a thousand horse power is being developed under heads from four to sixteen feet.

ARRIVALS IN ENGLAND.

The timber ship arrivals between the 2nd of July and the 9th inclusive comprised 100 bar one, of which 50 are sailers and 49 steamers. There are 13 arrivals from Quebec, altogether from the St. Lawrence ports 22, a good instalment of the spring fleet, and much in excess of last year at the same date, when there was a pretty full list of 77 vessels one with another. While our imports are falling off in other produce, timber seems to come forward with all the energy of an impatient market, one reason for which is, no doubt, that, as it is not a perishable article, the time to bring it forward is while freights are low, and it will be sure to be wanted some time or other, perhaps at a better price than can be got for it now.

We note that out of the largest fleet of vessels arriving from the St. Lawrence the first four sailing vessels to enter the port of London from Quebec were for Messrs. Bryant, Powis, & Bryant. Of these, we understand, the Komandor Svend Foyn has gone into the Millwall Docks to discharge, so that with this company will rest the credit of having unloaded the largest cargo imported during the season. We believe the 1,106 standards this ship delivers will not be equalled unless one of the big steam liners loads up a full and comple cargo of wood. The Deepdale, that came the year before last from Pascagoula, with 990 standards on board, was the next largest to the sailing ship above mentioned.—*Timber Trades Journal.*

VARIATIONS OF SPEED.

The contrivance of step cones with shifting belts is a cumbersome and troublesome one for procuring gradation of speed. In many cases it answers its purpose, but in others some more sensitive and intermediate device would be better. A change of speed is readily obtained by a change of position of a driven wheel on the face (side) of a driver wheel or disk. The face of this disk may be either straight or slightly dished, and the driven roll or small pulley traverse the face of the disk from the shaft to circumference. It is evident that while the driven wheel is nearest the shaft of the disk it will revolve the slowest; and also it is evident that as the driven wheel is run out toward the circumference of the disk it will revolve the faster.

The shaft of the driver—the disk—is, of course, at right angles to that of the driven pulley; these relative positions must be maintained. But it does not matter, in practice, whether the disk is on a horizontal or a vertical shaft, so long as the driven is so arranged as to be permitted to be placed in contact with the disk at any point from centre to circumference.

This device, with some modifications, has already been employed in the machine driving of potters' wheels and in the foot of driving of sewing machines. But it is capable of a wider adaptation, especially in the machine shop, where sudden changes or quick variations of speed are frequently necessary. The large disk may be of cast iron turned and finished, and the driven wheel of iron, leather faced, or of wood. The progress of the driven wheel from shaft to circumference of the disk—from low speed to high speed—could be controlled by lever, worked by hand or by foot treadle. It is a much closer and more sensitive device than the present system of absolute changes of speeds on our lathes and drilling machines.

CHANGES UNDERGONE BY WOOD IN CARRIAGE MAKING.

In an address delivered by Mr. H. G. Shepard, of New Haven, Conn., relative to the use of wood in carriage making, he said that after a piece of wood is bent its characteristics undergo a considerable change. The wood is heavier, and its fibres have become interlaced; it will sustain more pressure and strain than straight wood in the same directions, either accross or with the grain. He said: "A piece of timber that has been steamed whether it was bent or not has its stiffness increased. It is more brittle than it was before, and for some uses it will do as well, and yet there is a quality that the steaming process and the kiln drying process effect in much the same way; they both cook the gum in the timber and make it brittle and stiff. There is a kind of hickory that never becomes stiff by a natural process of drying, and one of the desirable qualities of a spoke, rim, or whiffltree, is stiffness as well as strength; you take hickory—and it is the very best we have—and steam it, and it is better fitted for these purposes than it was before. It is difficult to tear apart a piece of bent wood; the fibres are interwoven, one with another. We do not perceive the change on the outside, but when we come to split the stick open we find that its character is entirely changed.

Old Butternuts.

Antiquarian discoveries are in order. Mr. E. Wicks, of the township of Chatham, was digging a well last week, and six feet below the surface came across a decayed trunk of a butternut tree, and alongside of it found a number of butternuts, one of which has been handed us, an interesting relic of the sweet long ago. The date of the fall of the tree in question must belong to a remote period, as it was found under a solid bed of blue clay. Mr. Wicks thinks it must be over a thousand years old, Speculation on that point properly belongs to the geologist, who is now at liberty to express an opinion. The nut in our possession is in a good state of preservation, and as hard as, and when cut resembling in substance, a bone. The facts, as stated, can be verified by any person wishing to investigate.—*Chatham Planet.*

Two Hundred Schooners' Masts.

The Steamer "Storm King" left City Island, near New York, on Thursday for Boston with a raft of pine spars, intended for schooners' masts. The lot consists of some 200 sticks, worth $150 each; total value, about $30,000. A dozen or more are chained together through holes bored near the ends; then follow as many more in the same way until all are in line. A speed of about three miles per hour seems to be about all that can be made. An extra towboat cannot double it. The raft will pass down Vineyard Sound Shoals to Monomoy Point, Chatham, where good weather and smooth water are waited for, if necessary, in order to successfully proceed around Cape Cod.

TREATMENT OF OLD TREES.

Old trees, writes Dr. Halstead, are not always profitable trees. The soil of the orchard may be rich, deep and mellow, and the trees remain unproductive. It is difficult to make a whistle out of pig's tail. Some fruit trees are not fruit-bearing, and have little use as foliage plants. A farmer cannot afford to grow wood in the orchard, the wood lot is the only proper place for such a crop. All unproductive trees either need to be cut down and cast into the wood pile or engrafted with new blood and new life. Much may be done in an old, run-down orchard, by a thorough trimming out of the dead branches and scraping the bark free from all insect pests. But a tree that is thoroughly bad, which is known by the poor quality of fruit (or its entire absence) needs to have its nature changed by grafting. This work is a simple one, which any farmer may do. He needs to know that grafting is the planting of a piece of one plant in a part of another. The cion is a cutting set in a tree instead of in the soil. The cions should be cut from healthy trees of the best varieties. Cut only twigs of last year's growth, a foot or so long, and tie them up in bundles with labels. These twigs should be obtained before any signs of spring life is seen in the trees, and the grafting should begin when the buds are swelling. The operation is a simple one. The writer grafted successfully when seven years old, and any person can do as well. It is more of an art than anything else, and although not easy to describe it can be easily understood by watching an expert graft a few stocks, and a little practice will soon give the knack.

A Use for the Pine Cone.

For once the pine tree is to figure largely in a presidential campaign. The pine cone is to be the symbol of the Blaine boom, because the "magnetic" candidate hails from the pine tree state. It was said by the reporters in the convention that the Hawley delegates from Connecticut, when they saw that Blaine was nominated on the fourth ballot, each went down into his gripsack and picked out a pine cone that had been cut and dried and brought along for use in a possible contingency. These symbols of the pine tree state they held aloft in full view of the convention with electrical effect on all who beheld them. It was a graceful and appropriate Connecticut tribute to the victor and his state; but pine men need not infer that because they have a sort of resinous connection with the Republican candidate for president that they are in duty bound to vote him.—*Northwestern Lumberman.*

Wood Ashes as a Manure.

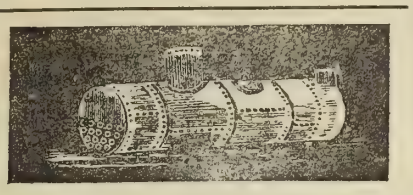
Ashes improve all soils that are deficient in the principles which they contain, and are especially adapted to root crops, grains and grasses. When applied in connection with bone dust, they produce, says a contemporary, excellent results on turnips, potatoes—all the roots, in fact clover, peas, beans and the grasses. Ashes and gypsum mixed form an admirable dressing. Ashes are applied in variety of ways. They may be drilled in the soil, sown broadcast, or mixed with the muck heap. Repeating the dressing of ashes without a sufficient amount of vegetable or yard manure will in time prove detrimental, but there is not much danger of this mistake. Coal ashes are decidedly inferior to those made from wood, and depend largely on their mechanical influence for value. They are better adapted to heavy than to light soils.

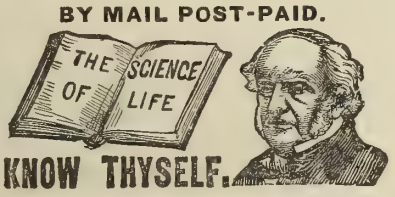
Effects of a Theory on Trade.

When, a few years ago, the rapid extinction of the American forests was persistently insisted on, till people began to believe in it, a great stimulus was given to the timber trade here, as shown by the larger importation of 1876 and 1877, but when it became apparent that the more buyers were willing to extend their orders the more sellers arose to compete for them, they lost faith in the doctrine, and the trade soon shrank even within the orbit of its customary dimensions, and 1879 was as much below as 1877 was above an average year of importation. Since then the trade has gone on more evenly; but this year the cheapness of freight may possibly, to some extent, cause market cargoes to disturb its equilibrium.—*Timber Trades Journal.*

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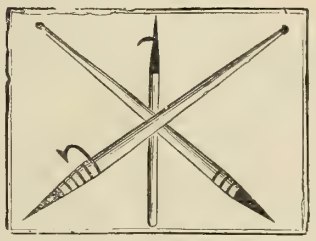
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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., AUG. 15, 1884.

AMONGST the recent arrivals from Quebec in the above docks we note the Loyal with 750 standards for Messrs Bryant, Powis, & Bryant. This vessel is the next biggest of the sailing fleet to the Komandor Svend Foyn; her contributiou to the market consists of pine and spruce deals, besides cases of splints and broom handles, the entire cargo going overside.—*Timber Trades Journal.*

THE present time affords grand opportunities for improving and extending large existing works besides commencing new ones, values of building commodities all around being so greatly reduced, and money plentiful in the market. This, in addition to the remarkably cheap freights, will probably bring the estimates made, when things were better, well within the mark. Those even who drew the line very fine when submitting tenders should be able to carry out their undertakings comfortably.—*Timber Trades Journal.*

THE *Monetary Times* says:—A vessel was to be launched from G. S. Turner's ship-yard a Harvey Bank, N. B., last week for St. John parties. She 210 ft. keel, 40 ft. beam, 24 ft. hold, measures 1,765 tons and classes 12 years in French Lloyd's. The material used in the vessel is chiefly spruce, the rails, waterways and stringers being pitch pine, the keel and floors of birch, and the bits of oak. It is understood that the Hon. Mr. Turner will shortly commence the construction of a ship of 2,000 tons for parties id Albert County.

A CLEAN and excellent coating for wood is asbestos paint, or, better still, the thicker asbestos concrete. These substances act like true paint, adhere tightly to the wood, give good protection against high temperatures, and do not readily rub or chip off. It has but one objection, that is, its solubility in water; but for interior theater purposes this is no material objection. Great care must be taken in purchasing this article, and it should always be tested before being used, as much of the so-called "asbestos paint" which is sold is entirely worthless.—*C. John Hexamer, in "The Spectator.*

FOREST CONSERVATION.

THE almost universal complaints heard on every side, from the Malay Archipelago to the Western States of America, of the general apathy in regard to the vital question of forest conservancy should urge Canada to more vigorous efforts in this direction. Her forest wealth may be considered almost limitless, and a good start in the right direction might, in not very many years, be provocative of untold direct benefit, by enabling her, with greater facility, to cull such timber for the world's market as in quality and quantity should far more than rival that of countries who fail as yet to recognize the supreme importance of so legislating for the preservation of their forests, and of so enforcing these regulations as that, not only shall their present value be enhanced, but bountiful crops be ensured for the future.

Much has been done; much remains to do.

The general public has been stirred by speeches, blue-books, pamphlets, lectures and newspaper articles, to give this subject their earnest consideration. But, from the general public, consideration is perhaps the most that may be expected. Forest conservancy is outside the sphere of any but those who have to do directly with the production and exportation of raw material. It is to our lumbermen, therefore, to whose advantage, indeed, more than to that of any other class, such enhanced value of forest lands and forest productions will redound, that we should look for the urging on of that interest which, we are glad to notice, has already been begun in Canada.

But let us not waste time. Already Germany is outstripping us—at all event theoretically—by her forest schools. Russia, too, and Austria, are not far behind. Not a few in the United States are powerfully agitating this subject; to say nothing of France, India, Norway, Sweden, etc. Nevertheless there is nothing to fear in the lead they have gained. It is at present chiefly merely experimental. Germany has but lately undertaken experiments which will require 50 years for their thorough investigation and proof. Forestry is as yet an infant science. We cannot yet have lost very much ground, and we may, at all events, console ourselves with the thought that the theoretical knowledge gained by European nations may, by us, be practically applied. The differences of growth, variety and climate, must, of course, be taken into consideration, but with already obtained *data* as a basis, there should be no difficulty in progressing rapidly in the most beneficial direction possible.

SCIENTIFIC FORESTRY.

THE growing attention that is being paid to the scientific conservation and reproduction of forests is shown by the frequency of the publications upon the subject that are now constantly issuing from the press. We have just received from the Rev. John Croumbie Wood, one of the most fertile and instructive writers on this subject, a copy of his new work "Forestry in Norway," published by Oliver & Boyd, of Edinburgh. The holding of the International Forestry Exhibition in the Scotch capital is certainly being productive of good results.

This volume is the more interesting to us in Canada because the situation in Norway somewhat similar to that of our Dominion. It has been commonly supposed that the forests of both Canada and Norway were practically inexhaustible, at all events within any period that could concern the present generation. It appears evidently however that this has been taken for granted too readily. We learn from Mr. Brown that not only the farmers, but even the lumbermen, of Norway are now lamenting the wholesale destruction of the forests. In some old forest districts the climate has been deteriorated, and timber has to be imported instead of being exported as formerly.

But the most instructive portions of this work are the concluding chapters, which show that the Government has become awake to the extent of this evil. Forests are being taken under Government control, experimental plantations are being systematically made, and a complete staff of forest officials has been established. Still more instructive for us in Canada is the fact that the Agricultural School at Aars has been utilized for the teaching and study of forest science.

When will we in Canada learn by the example in this matter of the leading nations of Europe?

FENELON FALLS.

From our Own Correspondent.

A FINE RAFT.—Mr. J. M. Irwin's raft of square timber is now (August 1st) passing over the Midland Railway. It is loaded on the cars at Fenelon Falls and several trains pass here daily on their way to Belleville, where the timber is dumped into the Bay of Quinte and rafted and taken to Quebec. This is the largest raft that ever came down the Gull river waters in one block. The timber was cut in the township of Eyre, and landed on Saw Log creek. This creek was made navigable for square timber last fall and winter at considerable expense by Mr. Irwin, one of the features being a slide of over 1,400 feet long. This is the largest slide on any of the waters north of this, even if it is not the longest in Canada. Some idea of the roughness of the creek may be imagined when we mention the fact that one lumberman, who owned limits six miles up this creek, and who one winter landed several thousand logs upon a marsh about four miles up this creek, decided that the creek could not be made navigable and left the logs in the creek, and the winter following reskidded the logs out of the creek and hauled them some three miles to another lake. No difficulty, however, was found this spring in driving the out their large drive of timber, and Mr. Irwin also anticipates that he will have no trouble in driving out the large quantities of timber and saw logs which are yet to be cut and brought down this creek. We understand Mr. Irwin has already had one very good offer made for his raft. The timber is mostly waney, very large, and of a very fine quality, and if any lumber sells well this should. In conclusion we may remark that the creek improvements, timber making and driving was done under the superintendence of our townsman Mr. Geo. S. Thompson, who for many years past has superintended the woods department of Mr. Irwin's business.

THE LUMBER TRADE OUTLOOK.

Confidence in regard to the outlook for heavy business in the lumber trade during the fall months continues unimpaired, notwithstanding the great number of failures reported. The confidence is inspired by reports from every section of the country through the local papers in regard to extraordinary building operations. Such a condition of things must eventuate in a lively demand for lumber previous to the close of navigation. The depleted stocks in the eastern distributing centres and retail yards all unmistakably sustain the opinion expressed above. There is nothing really discouraging in the lumber outlook, as regards a spirited demand.—*Lumberman's Gazette.*

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, July 29, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., N. W., Washington, D. C.:—

302,595.— Auger-bit—H. L. Shaler, Deep River, Conn.

302,931.—Boring tool.—L. S. Faught, Philadelphia, Pa.

302,649.—Chucks, reversible jaw for lathe—J. W. Carleton, New Britain, Conn.

302,644.—Lathe, concentric—H. C. Albee, Detroit, Mich.

302,794.— Lubricating apparatus —J. L Booth, Meriden, Conn.

302,771.— Lumber elevator —J. Pauly, La Crosse, Wis.

302,874.— Planing machine—H. C. Tunis, Baltimore, Md.

302,766.—Saw sharpening machine—T. O'Connor, San Francisco, Cal.

302,766.—Saw tooth—F. V. Conover, Walde, Tex.

302,741 to 602,744.—M. Kunz, Oberhausen, Germany, compositions for filling, grinding and polishing wood.

PATENTS ISSUED JULY 5.

303,091.—Gear out of connection, device for throwing—J. Sinnamon, Oswego, N. Y.

302,230.—Hammer for driving and holding tacks, etc.—J. W. Niebel, Buffin, Ohio.

302,911.—Planing machine —R. B. Jones, Chicago, Ill.

302,941.—Plugs or dowel pins, device for cutting—P. Robarge, Aurora, N. Y.

303,187.—Rule and square combined—G. D. Umland, Osceola Mills, Wis.

303,138.—Saw bow—C. Ensminger, Albany, N. Y.

302,891.—Saw set—J. Charlton, Newark, N. J.

303,127.—Saw set.—C. Croissant, Albany, N. Y.

302,902—Saw set—H. Flater, Findlay, Ohio,

302,895.—Wood bundling machine —L. H. Converse, St. Louis, Mo.

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c, measured and culled to July 25:—

	1882.	1883.	1884.
Waney White Pine..	739,677	1,340.757	979.509
White Pine.....	2,587,094	1,213,191	903.680
Red Pine.....	392,896	123,556	50,311
Oak.....	643,069	871,427	452,275
Elm.....	441,986	242,609	507.131
Ash	156,081	146,335	341,531
Basswood	256	1,337	262
Butternut.....	1,960	835	1,088
Tamarac.....	1,427	2,765	16,937
Birch & Maple.....	262,273	136,494	185,053
Masts & Bowsprits...	33pcs	—pcs	—pcs
Spars.....	— pcs	—pcs	32 pcs
Std. Staves.....	237.3.2.15	341.6.1.1	10.6.2.22
W. I. Staves.....	604.1.0.0	332.6.1.1	69.8.1.23
Brl. Staves.....	10.6.3.4	77.0.0.21	0.6.2.13

JAMES PATTON,
Quebec, July 25. Supervisor of Cullers

RAFTS ARRIVED.

The Quebec *Chronicle* has the following list of rafts arrived:

JULY 28.—D. D. Calvin & Co., oak and pine, sundry coves.

Burton Bros., pine Sillery (Sharples).

David Moore, white pine, Cap Rouge.

" white and red pine, Cap Rouge.

JULY 29.—J. & B. Griers, white and red pine, Dalhousie cove.

JULY 31.—A. & P. White, white and red pine, St. Lawrence Docks.

THE PROPORTION OF FAILURES TO TRADERS.

In 1870 in the U. S. there were 3,551 failures out of 426,000 traders, or 1 in 120, with liabilities of $88,242,000. In 1871, 2,915 failures (1 in 163), $85,252,000 liabilities. In 1872, 4,069 failures (1 in 130), $121,036,000 liabilities. In 1873, 5,183 failures (1 in 108), $228,499,000 liabilities. In 1874, 5,830 failures (1 in 103), $155,239,000 liabilities. In 1875, 7,740 failures (1 in 83), $201,060,000 liabilities. In 1876, 9,092 failures (1 in 76), $191,117,000 liabilities. In 1877, 8,872 (1 in 64), $190,669,000 liabilities. In 1878, 10,478 (1 in 66), $234,383,132 liabilities. In 1879, 6,658 (1 in 105), $98,149,053 liabilities. In 1880, 4,735 (1 in 153), $65,752,000 liabilities. In 1881, 5,582 (1 in 140), $81,155,932 liabilities. In 1882, 6,738 (1 in 122), $102,000,000 liabilities. In 1883, 9,184 (1 in 94), $173,000,000 liabilities. The number of traders has yearly increased from 426,000 in 1870 to 863,993 in 1883, except in 1877 there was a diminution of about 16,000 from year previous.

BRITISH LABOUR MARKET.

The British labour market, as reported by the London *Labour News* of July 9, continued very unsettled. Wages disputes and strikes were cropping out in all directions. Large numbers of miners were on strike in East Worcestershire and South Staffordshire, and "several thousands" of employees of Dawlais Collieries have struck. The texile industries are variously situated, some being better supplied with orders than others, The weavers at Burnley were still on strike, and the Preston cotton mill weavers left off work for alleged non-fulfilment of agreement to advance wages in July.

THE CORK-TREE.

This is a native of southern Europe and northern Africa. It grows to a height of 40 or 50 feet. It is the great source of the cork of commerce. This substance is the outer bark of the tree, which is of great thickness and elasticity, owing to the extraordinary development of the cellular tissues. The corky bark ultimately cracks and separates from the inner bark, which remains attached to the tree. Both the outer and the inner bark abound in tannin, and the former contains a peculiar principle called *suberine*, and an acid called *suberic* acid. The cork-tree flourishes well south of Virginia; it will stand ordinary winters north of this state, but severe winters injure it considerably, especially when the plants are young. A plant in the grounds of the department was killed during the severe winter of 1880-81, when the thermometer indicated eighteen degrees below zero. It is readily raised from the seeds, which, however, have to receive a special care in packing, so that they may retain their vitality during the time necessary for the transportation from Europe. The trees are usually allowed to grow for sixteen years before the first removal of the bark takes place. The first crop of bark is considered of but little value, except for tanning purposes, being full of cracks and cells. After a period of eight or ten years the bark is again removed, but this is also considered of an inferior quality, and is employed for floats for nets and such purposes. At the end of ten years or more a third cutting takes place, when the cork is esteemed of thickness and quality. The bark is removed by making longitudinal and transverse incisions, so as to allow it to be taken off in flakes. When first romoved from the tree the bark is curved; the pieces are straightened by placing them in water and laying heavy weights on them; they are afterwards held over a blazing fire until the surfaces become scorched or blackened, which has the effect of closing the pores and giving a closer texture to the cork.

The best cork is not less than one-and-a-half inches in thickness; it is supple, elastic, neither woody nor porous, and of a reddish color. Yellow cork is considered of inferior quality, and white cork, which has not been charred on the surface, the worst. Although the charred surface is considered evidence of good quality, yet it is said the charring process has a detrimental effect, as it secretes an empyreumatic oil, which is given off and is frequently taken up by the liquid which the cork confines when in use. The firing is sometimes partially superceded by the process of boiling the cork and afteawards scraping its surface, which is said to be more effcetual in closing the pores.—*Southern Lumberman.*

Failure in Casting a Cannon.

Disastrous failure attended the attempt to cast a 120-ton steel cannon at the South Boston Foundry recently. The metal was conducted to the mould successfully and the process of cooling begun, when the entire mass suddenly exploded, setting the building on fire, but fortunately not injuring the workmen. The cause of the explosion is supposed to be an insufficient supply of cold water in the core. Krupp still retains the ribbon for successfully casting heavy ordance.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain and cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup for children teething. Its value is incalculable It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentery and diarrhœa regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation. and gives tone and energy to the whole system, Mrs. Winslow's Soothing Syrup for children teething is pleasant to the taste, and is the perscription of one of the oldest and best female nurses and physicians in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

No Kval in the Field.—There is no rival for Dr. Fowler's Extract of Wild Strawberry. It is the acknowledged champion for the cure of all summer complaints.

Rescued at last.—W. H. Crooker, druggist of Waterdown, says, when all other remedies fail for bowel complaint, then Dr. Fowler's Extract of Wild Strawberry comes to the rescue

LUMBER DRYING APPARATUS

A Hawkins' Patent

DUPLEX HEATER

Containing 2000 feet of 1-inch and 2000 feet of 1¼-inch Wrought Iron Pipe, with casing and conducting pipes and a 60-in. STURTEVANT BLOWER, all in complete working order. Can be used either with exhaust or live steam, or both.

This is the latest and most complete method of drying lumber, and will be sold low.—Apply to

T. McAVITY & SONS,
12, King Street, ST. JOHN, N.B.

MILITIA

SEALED TENDERS, marked on the left hand corner of envelope "Tenders for Militia Clothing and General Store Supplies," and addressed to the Honorable the Minister of Militia and Defence, will be received up till noon of Monday, 11th August, 1884.

Printed forms of tenders, containing full particulars, may be obtained from the Department at Ottawa and at the following Militia Stores, where also sealed patterns of all articles may be seen, viz:—The offices of the Superintendent of Stores at London, Toronto, Kingston, Montreal, Quebec, and St. John, N. B.

Tenders not in relation with sealed patterns of the Department or accompanied by special patterns will not be received.

No tender will be received unless made on printed forms furnished by the Department.

The material of all articles will require to be of Canadian manufacture and Canadian workmanship.

Each tender must be accompanied by an accepted Canadian bank cheque, for an amount equal to ten per cent. of the total value of the articles tendered for, which will be forfeited if the party making the tender declines to sign the contract when called upon to do so, or if he fails to complete the service contracted for. If the tender be not accepted the cheque will be returned.

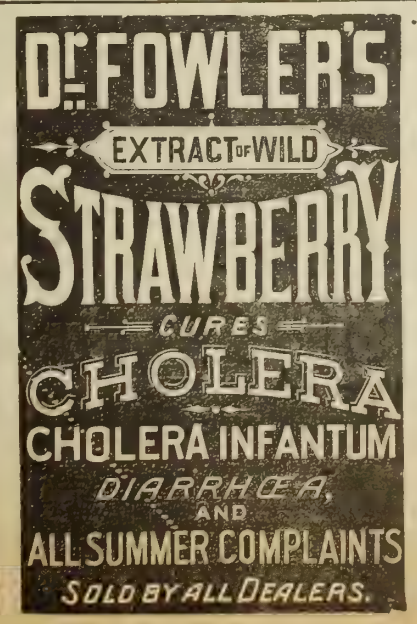
The Department will not be bound to accept the lowest or any tender.

C. EUG. PANET,
Deputy of the Minister of Militia and Defence
Ottawa 4th July, 1884.

WHEREAS, on the night of the 18th instant, the Post Office at Peterborough, Ontario, was entered by burglars, and money and postage stamps stolen therefrom, and moreover a number of valuable letters opened and robbed of the contents; notice is hereby given that a reward of TWO HUNDRED AND FIFTY DOLLARS will be paid for such evidence as may lead to the arrest and conviction of the thief or thieves.

JOHN CARLING,
Postmaster General.

Post Office Department,
Ottawa, 31st July, 1884. 3d33eod3L3



MONTREAL SAW WORKS

CHAS. M. WHITLAW, Manager.

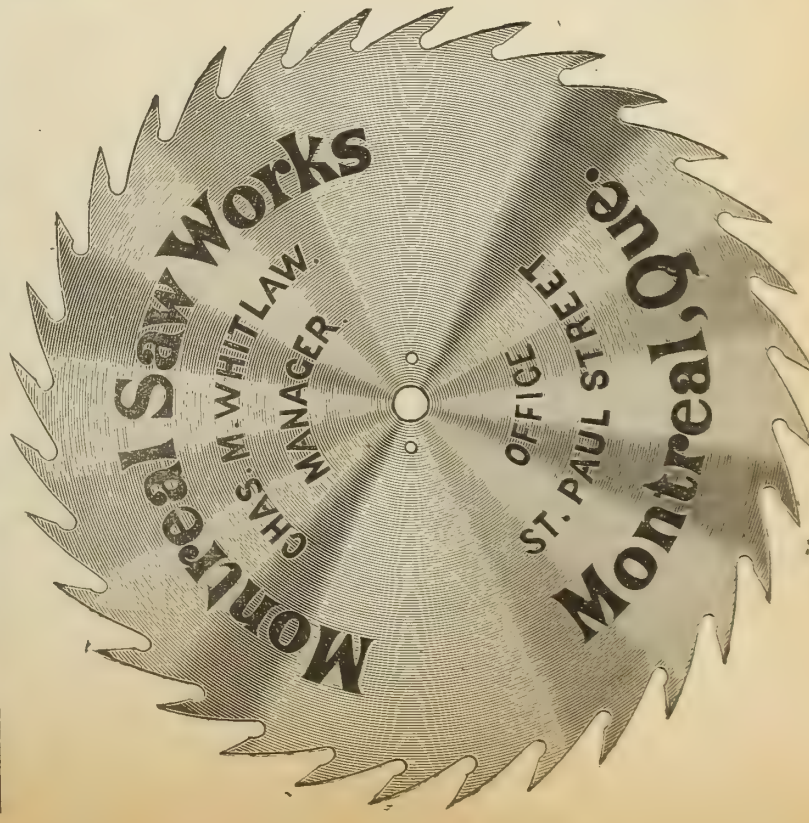
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WHEELS, GUMMERS AND CUTTERS FILES,
RUBBER & LEATHER BELTING, SWAGES, SAW SETS.



Catalogues and Price Lists furnished on application.

DRIVING BY FRICTION.

For many purposes for which gear wheels were formerly used surface friction wheels are now employed. If the surfaces are properly matched as to material, and are sufficiently large as to area, there appears to be no reason why friction wheels cannot be more extensively employed than they have been heretofore. One of the objections has been that there must be an end thrust, which by its friction absorbs much of the power. It is a baseless objection, as may be seen in the friction clutch of the overhead countershaft of the lathe, and in many other situations where the release of the friction is the easiest and most natural movement. To be sure, in this case the amount of contact is very large—the entire circumference of the pulley—but the principle is the same; for where the pulley friction clutch must be held as one with the moving pulley, so the friction wheels are one so long as they are in contact, and their contact is a mere point against the circumferential contact of the pulley clutch.

An objectionable method of employing the friction driving is to use a metallic surface against a wooden or a leather surface; two surfaces of wood are better; but if iron and leather or iron and wood are used together, the driver should, in all cases, be made of softer material. For when the driver is thrown in contact with the driven, it must make a number of revolutions before its contact will be sufficient to start the driven wheel. It is evident, therefore, that if the driver is of iron while the driven is of some softer substance, it (the driver) will wear a crease that will injure the surface of the driven wheel. It is much better, where it is practicable to make both the driving surfaces of wood.

Excellent wheel s are made of maple—hard rock maple—and of lignum vitæ, the lignum vitæ wheel to be the driven and the maple the driver. The wheels should be a cast iron spider made to receive the wood, which should be sawed into wedge-shaped or radial segments, so that the end grain of the wood bears and makes the contact surfaces. Excellent results have been obtained, also, with hard rubber (vulcanized) and wood, where there was no oil to rot the rubber, and for small wheels there is nothing better than raw hide as prepared for pickers for looms and for small gears. This will stand oil and resist its disintegrating influence.

One of the advantages of friction wheels over cogged wheels is that when they are start ed there is no shock, but only a gradual coming up to speed. Another is their noiselessness; but the epicycloidal cutting of gear teeth latterly has made the objection untenable, as gears can be run as silently as belts. But a great advantage is the very slight movement necessary to connect and disconnect, the actual surfaces requiring to be merely and barely separated to insure a stoppage of motion.

ABOUT LUMBER.

The *Monctary Times* says:—The extravagant scale on which lumbermen are wont to operate on this continent, the expensive methods of conducting the business, and the disproportion which the cut often bears to the probable demand, have long attracted the attention of observers, and are now getting some consideration from lumbermen themselves. Says the Chicago *Northwestern Lumberman*, "A small cut of logs next winter is now more seriously talked of than it has ever been before. The necessity for reducing the cut was never more apparent than now. For the past two logging seasons less work in the woods would have proved highly advantageous, but the operators could not bring themselves down to a slow gait. Last season the marked conditions made an urgent appeal to the mill men to curtail their cut, but they did not heed it. Logging was so easily done that in many cases the tally sheets footed up big figures at an early date. Under such favorable conditions as existed work could not stop, or rather the operators did not think it could, and the result of the season's work showed a large crop. Many of the men who logged would be highly pleased if the greater portion of the logs cut were back on the stump. Many logs are selling at a price that leaves nothing for stumpage."

The simple and sensible conclusion of the *Lumberman* is that this kind of business does not pay. Considering the amount of standing pine, and not only a growing demand, but one that will never cease so long as there is a pine tree in the Northwest, adds that journal, stumpage has a positive value, and it is extremely unbusiness-like to slaughter it.

Respecting the lumber trade in the western part of Nova Scotia, the Yarmouth, N. S., *Herald* states "that the lumber trade of 1884 will show probably as large an output as that of any year in the history of Bridgewater. Messrs. Davidsons' output will be nearly or quite 14,000,000 feet, and that of Duffus & Co. in the vicinity of 5,000,000, while other mills will swell the total lumber product of the La Have to perhaps 25,000,000 feet."

The Ottawa *Citizen* of 30th July makes the statement that the number of rafts passing through the slides at Ottawa this year is the smallest known for several years. This is owing to the large shipments of square timber by rail.

A Montreal despatch of Tuesday last to the Quebec *Chronicle* runs: "The shipment of lumber to date for American ports is upwards of two millions of feet in excess of that of last year."

NOTES ON SOME MALAY TIMBER TREES.

The following is an extract from an article by Mr. James Collins in a recent number of the *Journal of the Society of Arts*, which also contains a table showing the results of experiments on the stiffness, and giving the characteristics, of some of the prinicpal woods of Singapore, Malacca, and Johore. The subject of a large supply of timber is a most important one, and a few notes on the question as regards to the Straits Settlements will, it is hoped, be found of use. These will be but brief and preliminary, as the materials at command are too scanty at present to deal with the question otherwise. Johore, although an independent state, under the rule of His Highness the Maharajah of Johore, K. C. S. I., &,, is also included in the present note.

The extent of forests has been variously stated, but the following figures may be taken as an approximation:—

Singapore	20 to 30	square miles,
Malacca	160 to 170	"
Penang and Province Wellesley	110 to 120	"
Johore and adjacent Islands	10,000	"

To this must be added Selangor, Perak, and the other native states of the Malayan Peninsula, some of which are more or less under British Government control.

The forests of the Straits Settlements, properly so called, are the sole property of the Government, as is the case also with those under the Maharajah's rule. They are, however, in all cases rapidly decreasing, and no means are taken to stop this. The system of working them is as follows:—A person wanting a tract of land applies to the land office, and pays tenths on the value of the timber cut. Forest rangers, and occasionally the police, have to see that none but those having this license or permit cut timber.

This land may be required for the timber on it, or for cleaning for the cultivation of various products, and the forest supply of timber suffers most materially if the occupation of the land is not permanent but temporary. Thus a tract of land having been secured, the primeval forest is cut or burned down, and the timber left to rot. Between the fallen trunks, gambier, pepper, rice, tapioca, or other products are raised, and after a few crops have been taken off, the ground becomes exhausted. To procure and clear a fresh spot is often cheaper than manuing the old soil, so the previous plantation is abandoned to white ants, secondary jungle—as a rule of lalang grass—low scrub, with here and there small and useless trees. This lalang grass (*Andropogon caricosus*), when once it gets possession of the ground, stifles everything else, and its long fibrous and tough roots resist all native efforts to eradicate it; even a prairie plough would possibly reclaim the land at too great a cost. The pretty little sensitive plant Mimosa soon carpets the ground with its flaming yellow flowers, and it is more difficult to eradicate.

Singapore hardly cuts any timber at all for her own use, being chiefly supplied from Rhio and the adjacent islands, and also from Johore. In Malacca a greater quantity can be cut, but from want of roads or streams it is very difficult to get timber from a greater distance than fifteen to twenty miles from the town. Penang and Province Wellesley cannot cut much timber, unless the risk of climatic disturbance be run. The Straits Settlements export no timber to speak of; what little Tampinis and other hardwoods which have been shipped occasionally to Ceylon and Mauritius being chiefly from other islands.

With the territory of Johore the case is different. Some years ago H. H. the Maharajah erected extensive steam saw mills, and these mills, under the enlightened and able management of Mr. James Meldrum, have placed in the markets a large quantity of timber.

The following figures have been supplied me by Mr. Meldrum. Exports of timber from Johore, 1863—1874:—

To British India	15,000	$115,000
" China	7,000	84,000
" Mauritius	3,000	36,000
" Java	2,700	27,000

Taking in "sundry places," about 40,000 loads of hardwood have been exported, principally in the form of logs or railway sleepers; the trade in the latter has fallen off, through the more general employment of iron cradles. About 60,000 loads of softwoods, in the form of logs, planks, boards, &c., have been exported. Of these softwoods 25,000 loads were taken by Singapore, at a value of $270,000.

Mr. Meldrum states, as the result of about twenty years' experience, that the Johore forests are diminishing rapidly, that the seashores, islands, and other easily attainable localities are cleared, and that a good supply cannot be hoped for till the rivers are made more navigable and good roads pushed into the interior.

As will be seen, no steps have been taken as to conservancy or cultivation, and this calls for immediate attention. As to how this is to be managed need not be entered on here, but in parenthesis we may state that in following in the lines of the Indian Forest Conservancy, with a few modications, would amply meet the case.

As to the climatic changes brought about by the clearance of forests in this part of the world very little can be said. The late Dr. Randell, Principal Medical Officer, S. S., in his Annual Meteorological Abstract for 1873, has the following:—

"The only causes that appear to me to exist, or have existed, to which this great decrease of rainfall may be attributed, is the extensive clearing of forest on the mainland of Johore, contiguous to this island (Singapore), which has been effected principally during the period under notice; and I would suggest that the conservancy of portions of forests may be taken into the consideration of Government."

Certainly many old inhabitants have informed me that the heat is greater and the rainfall less in the Straits Settlements than it used to be. One thing, however, has done largely to mitigate and render less apparent the great destruction of forests, and that is the enormous extent to which the cocoanut palm and other fruit trees are cultivated.

AMERICAN WOODENWARE.

Perhaps in no branch of American industry has greater progress been made during the last thirty years than in the vast and varied manufactures of wood. We have not only distanced all rivals in this branch of industry, but we have gained a firm foothold in foreign markets, especially for agricultural implements, furniture, and a variety of labor-saving machines. The perfection to which our wood-working machines have been brought by unrivalled ingenuity has given American manufactures of wood a world-wide reputation. For, as nine-tenths of the cost of articles included under the head of "woodenware" consists in the labor necessary to their manufacture, and the wages of labor in this country are comparatively high, it could hardly have produced successfully its own woodenware without the aid of machinery. With this aid, however, the home market has not only been supplied by home dealers, but American woodenware has found its way into various foreign markets. For instance, the exports of woodenware for the year ending June 30, 1882, were valued at nearly half a million of dollars. The manufacture of furniture increased in value from $17,633,000 in 1850 to $75,539,000 in 1870, while the estimated increase in the last thirteen years has been very large. The growth in the manufacture of agricultural implements has been still greater. With woods of all kinds in abundance and easily accessible, with improved machinery for the purpose, there seems to be no reason why the exportation of woodenware should not yearly increase.—*Journal of Progress.*

HOW PIPES ARE MADE.

The short clay pipe formerly used by smokers has of late years been to a great extent supplanted by the wooden pipe the manufacture of which is now an important industry. Some interesting information respecting these pipes is given in Consul Inglis's trade report on Leghorn, whence the material for making wooden pipes is now largely exported. Similar works are also to be found at Siena and Grosseto. Selected roots of the heath—preference being given to the male variety—are collected on the hills of the Maremma, where the plant grows luxuriantly, and attains a great size. When brought to the factory the roots are cleared of earth, and any decayed parts are cut away. They are then shaped into blocks of various dimensions with a circular saw set in motion by a small steam engine. Great dexterity is necessary at this stage in cutting the wood to the best advantage, and it is only after a long apprenticeship that a workman is thoroughly efficient. The blocks are then placed in a vat, and subjected to a gentle simmering for a space of twelve hours. During this process they acquire the rich yellowish-brown hue for which the best pipes are noted, and are then in a condition to receive the final turning; but this is done elsewhere. The rough blocks are packed in sacks containing forty to one hundred dozen each, and sent abroad, principally to France (St. Cloud), where they are finished into the famous G. B. D.,, or "pipes de bruyere," known to smokers in England under the name of "briarwood" pipes. The production of this article is considerable, four hands turning out about sixty sacks per month. Consignments are also made to England and Germany; but, the Anti-tobacco Association will be glad to hear that at present the demand is said to be rather slack.—*Timber Trades Journal.*

WHITEWOOD.

Whitewood is very easy to work—it probably ranks next to pine in this respect—takes a good finish and makes a close joint. There are complaints against cypress for sash, doors, and blinds because, it is said, it is too hard a wood to drive together and make a perfect joint. Too much work must be put on the pieces where they come in contact to cause them to fit closely. In pine work this extra work is unnecessary. The wood is so soft that it readily gives, and the tight joint is at once produced. There are others who claim that such a fault with cypress does not exist; but that it does somewhat there can be no question. Not that perfect cypress sash, doors, and blinds are not made, but it requires a little more attention and labor to make them than it does from pine. In regard to softness, whitewood probably ranks next to pine; it is not quite as easily worked as pine, and a little more easily than cypress.

The Doomed Chestnut.

A scientific authority claims that the chestnut tree, which is disappearing so rapidly, has a fixed period of evolution. This tree, like all others of the spongy inferior fibre, cannot flourish beside the close-fibered trees, such as the oak. In ancient times a rank, quick growth covered the earth, which yielded, as the ages went, to the stouter trees. Thus it is the chestnut is doomed in the operation of the same law.

Chips.

THE claim is made for cedar that the tree is never struck by lightning, and that, therefore, a building covered with cedar shingles is free from danger from this source.

IT is stated that Louisiana has about 48,000,000,000 feet of pine in her forests. As the three great lumber states of Michigan, Minnesota and Wisconsin have only 82,000,000,000 feet. It will be perceived that Louisiana is very rich in timber resources. It has, in fact, more than half as much as the three other states combined.

IT is said that New York men are to build a mill near the Mt. Tom lumber mills, Northampton, Mass., at a cost of about $6,000, for the purpose of utilizing the waste wood of the mills for kindling wood for the large cities. The mills make about 20 cords of waste daily, which will make a car load of the kindling wood, which is to be cut up and tied in small bundles daily.

PRODUCTION in the north of Sweden is being restricted, and this in connection with the low pressure at which many of the mills (especially in the Sundswall district) have been working since the commencement of the season, cannot but have a beneficial effect before long in spite of the slackness of the building and cognate trades in both Great Britain and on the Continent.

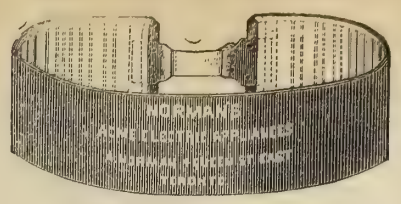
PRICES f.o.b. on the coast, says the *Timber Trades Journal*, are said to be slightly better this year than last; but, though some shippers are getting higher rates, others are pressing goods at some reduction. The inclination is to use the low freights as an argument for importing at the present time, but if the chief shippers adhere to their promise of curtailment even lower freights, we fear, will yet be heard of.

THE Dominion Dyewood and Chemical Company of Toronto, Canada, whose works were destroyed by fire last March, are about rebuilding on the former site at Don Station, Toronto, Ontario. The scope and volume of their business will be much enlarged. The new works are to be 160 by 82 feet, 3⅛ stories, and devoted to the manufacture of dye-woods, extracts, sulphuric acid, tin crystals, and mordants generally, mill soaps and lard oils.

AN ingenious dodge is described by a correspondent of the *Frontier Advocate*: The steam barge Derby, belonging to the International Lumber Co., of Newport, is taking home the hardwood lumber from the shore at present. She seems to be a very practical boat, for she hoists the logs from out the water and places them on the barge by a steam derrick, which is much easier than rolling them on by hand, and does it fast, putting and placing them at the rate of one per minute. She can carry 50,000 feet a load.

A NOVEL plan of draining high land marshes has been tried in some sections of the south with good success for several years. The *Southern Lumberman* speaks of a successful attempt on a marsh in Dougherty county, Georgia, that covered several acres. A framework was erected in the middle of the pond and a pipe driven down about 50 feet, when rock was struck, and the work of drilling a large hole commenced. This continued for 20 feet when, the rock being drilled through, the water ran out, and a screen being placed over the hole the bottom of the cavity was filled in with large stone to insure continued drainage.

AT a recent meeting of the New York State Commission on Forest Preservation one of the speakers maintained that among the things the State ought to do was immediately to take stock and find out what timber she is actually possessed of. She ought to have her timber pruned out and sold systematically. The ripe timber only should be cut, and when lumbermen paid for what they took they would not be tempted to cut any other than this, as no other could be manufactured at a profit. The Commission adjourned to meet again at Blue Mountain Lake about the middle of August. An inspection of the Adirondacks will then be made and their report prepared for submission to the Legislature.



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Yours truly, R. E. HALIBURTON.

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Yours truly, J. GREEN.

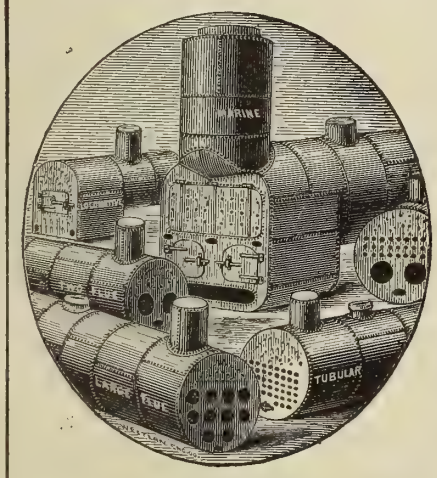
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We control "THE LATOUR PAT." for Camp Furniture, the best on earth. The only Gold Medal ever given for this class of goods was awarded to the Latour Camp Furniture at Toronto in 1882.

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We have secured the services of the best practical sail-maker in Canada. Orders in this line will receive prompt and satisfactory attention, as is usual with all orders entrusted to us.

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Market Reports.

TORONTO.

From Our Own Correspondent.

AUG. 8.—There is no change in the aspect of lumber trade worthy of note since my last letter. Dullness marks every department. At our docks it bears the aspect of one long holiday and at the retail yards it is but little better, and dealers feel thoroughly discouraged. Architects say, however, that the fall season will be a busy one, and certain it is that the wood working factories are full of work. The writer happened to be in one of our chief door and sash manufactories and the proprietor of which called the attention of his foreman to the fact that there were more orders in than could be turned out during the next two months, and, therefore, no more orders were to be taken in if immediate filling of such were required. On making inquiries at other establishments I found much the same conditions existing, and from this it may reasonably be inferred that the yard will not be long idle. although the consumption of lumber by the factories includes only the better grades of lumber of which we have no overstock. In past years we have had a class of buildings going up that used large quantities of the coarser grades of lumber, but buildings of this kind are now not numerous. Houses built of solid brick now command readier sale, and they give more employment to the factories than to the lumber dealers. It is thought by many that the late addition made to the boundaries of our city will give impetus to buildings of a cheaper class such as will rent or sell at low rates to mechanics and others, and doubtless such will be the case to a larger extent. I feel convinced, however, that shipments to the American market for the remainder of the season will be of a limited character and that mainly of the better grades of lumber.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
Scantling and joist, up to 16 ft	13 50
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 00
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	20 00
" " " 32 ft	21 00
" " " 34 ft	22 50@22 50
" " " 36 ft	24 00
" " " 38 ft	27 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	24 00
" boards "	20 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 00
Three uppers, Am. inspection	35 00@40 00

B. M.

1½-inch flooring, dressed	30 00
1½ " " rough	16 00
1¼ " " dressed	25 00
1¼ " " undressed	15 00@15 00
1 " " dressed	22 00
1 " " undressed	16 00
⅜ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ₱ M	2 90
Sawn Lath	2 75

MONTREAL.

From Our Own Correspondent.

AUG. 9.—We have no change to report in prices, and business continues very dull both wholesale and retail. Dry lumber is getting scarce here, but there is no encouragement for dealers to buy new stock in the present state of matters. We continue to quote as follows :—

Pine, 1st quality, ₱ M	$35 00@40 00
P ne, 2nd " ₱ M	22 00@24 00
Pine, shipping culls, ₱ M	14 00@16 00
Pine, 4th quality deals, ₱ M	11 00@12 00
Pine, mill culls, ₱ M	8 00@10 00
Spruce, ₱ M	10 00@13 00
Hemlock, ₱ M	9 00@10 00
Ash, run of log culls out, ₱ M	18 00@20 00
Bass, " ₱ M	17 00@20 00
Oak, ₱ M	40 00@50 00
Walnut ₱ M	60 00 100 00
Cherry, ₱ M	60 00@80 00
Butternut, ₱ M	35 00@40 00
Birch, ₱ M	20 00@25 00
Hard Maple, ₱ M	25 00@30 00
Lath, ₱ M	1 75@ 2 00
Shingles, 1st, ₱ M	3 00@ 0 00
Shingles, 2nd, ₱ M	2 50@ 0 00

SHIPPING

Has been active both to South America and Europe and there are at present 14 vessels at the wharf loading for that destination. The exports for last month footed up to nearly 4,000,000 feet. Freights to the River Platte are steady at $13 to $13.50, and 50s. to Liverpool and direct ports in the United Kingdom. The demand for tonnage at the moment is nothing extra.

CORDWOOD.

There is very little coming in by boats, but a good deal by rail. Retail sales are very slow at present, but dealers are now beginning to lay in stocks for fall and winter. Prices are unchanged. We quote at the wharves ex cartage :

Long Maple	$ 6 00
Long Birch	5 50
Long Beech	5 00
Tamarack	4 50

WINNIPEG.

The *Commercial* of August 5th says :—The business transacted during the past week has been fairly liberal, and as the season advances dealers anticipate that trade will still increase. Prices are still hard to quote for the simple reason that each dealer has his own price, regardless of his neighbour or outside influence.

ALBANY.

Quotations at the yards are as follows :—

Pine, clear, ₱ M	$53 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	45 00@50 00
Pine, good box	22 00@33 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 16@00 21
Pine, 10-in. boards, 16 ft., ₱ M	28 00@32 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	16 00@18 00
Pine, 1-in. siding, select	43 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2¼x4, each	00 00@00 14
Hemlock, wall strips, 2¼4, each	00 00@00 11
Ash, good, ₱ M	40 00@43 00
Ash, second quality, ₱ M	25 00@30 00
Cherry, good, ₱ M	60 00@85 00
Cherry, common, ₱ M	25 00@35 00
Oak, good, ₱ M	40 00@43 00
Oak, second quality, ₱ M	20 00@25 00
Basswood, ₱ M	25 00@30 00
Hickory, ₱ M	40 00@40 00
Maple, Canada, ₱ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ₱ M	38 00@40 00
Shingles, shaved, pine, ₱ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 4 75
" clear, "	0 00@ 3 25
" cedar, mixed	0 00@ 3 00
" cedar, XXX	0 00@ 3 50
" hemlock	0 00@ 2 60
Lath, hemlock, ₱ M	0 00@ 2 25
Lath, spruce, "	0 00@ 2 50

CHICAGO.

AT THE YARDS.

The *Northwestern Lumberman* of August 9th, says :—The condition of the market during the week has been as dull as that of any week since the opening of the season. Though arrivals have been only fairly plenty, the docks, since Sunday, have been hemmed in by a fleet of considerable size, and the vessels have clung to the market with a staying pertinacity that has been anything but pleasing to either the commission merchants or skippers. The yard dealers have manifested an unwonted apathy about taking hold. Stocks have accumulated to such an extent that dealers are not inclined to buy freely when trade is in its present slack condition. The money question is also a matter of consideration. So long as the bank maintain a conservative attitude, and the financial heavens are far from clear of clouds, it is simply the part of wisdom for the lumber merchants to move with caution.

The pivotal point in this season's market seems to have quite or nearly arrived. The market hangs on the value of dimension. As long as piece stuff holds, the market can be saved. When that breaks, and a point or two is lost, there is much doubt as to the result. The peculiarity of the present position is that the imminence of the peril has made a common cause between the sellers and the buyers as regards anxiety. It may be asked, then : Why do not the merchants come forward freely and buy in order to uphold the market? Simply because they cannot with safety to themselves and self-preservation is the first law of existence. They realize that they must purchase as cheaply as possible, and at the same time they would like to have the actual state of the market hidden from the world. In this attitude we see the reason why "p. t." was written on transactions for the last three weeks up to the beginning of the present week. Now the actual condition can no longer be suppressed, and secrecy is relaxed.. The price of short piece stuff has fallen off a point, so that lumber that sold last week at $8.50 can now be bought at $8.25. As we go to press the market is trembling in the balance, and we will not undertake to say how much the decline will be before, in the fall, it catches on something that will hold. If only a point is lost, the market may rally at $8.25 and stay there until a revival of the yard trade, which, in all reason, cannot much longer be delayed. A brisk outward movement from the yards would put a much brighter phase on affairs.

Common inch lumber, having enjoyed none too good health all the season, is no better on account of the weakness of dimension. No. 2 stock of the coarser quality that is now flooding the market is freely quoted at $9 to $10 a thousand, which are figures that were not freely quoted a short time since. A better quality will range from $10 to $11. There is such a variety in the cargoes of No. 2 stock offering on the market that an exact statement of prices would have to include each transaction. The best that can be done is to give a range that includes the highest and lowest prices.

As an indication of the extent to which weakness has seized general lumber values, the sale of a cargo of inch lumber this week is in point. It was offered at $14 at first, and hung fire for two or three days at that figure. It finally sold at $12.50. This cargo would class as high medium or ordinary No. 1 stock.

It is openly stated that thick clears and selects in the general market have declined to the extent of $2 to $3 a thousand. This is one of the most noteworthy features of the present condition, and is exciting a good deal of comment.

No. 1 boards and strips are still holding up well, considering the weakness in other lines of lumber. One mill cut comes to the market here regularly that sells uniformly at $17, which shows the strength of No. 1 lumber when its quality is well understood.

Shingles, though arriving more freely than a short time ago, are selling at about the same figures as hitherto quoted, a considerable difference in price resulting from the diversity of brands and qualities.

Lath are selling at almost nominal figures, nobody appearing to be fully posted in regard to prices, which seem to be made very much to accommodate the buyer, and as a make weight in disposing of lumber. One dealer says that a blank mark after lath would be as good a quotation as any.

Quotations are as follows :

Piece stuff, green	$ 8 25@ 9 50
Long timber, green	10 00@10 50
Boards and strips—No. 2 green	9 00@11 00
Boards and strips Medium, green	11 00@13 00
Boards No. 1, green	15 00@18 00
High grade	18 00@24 00
Shingles, standard	1 60@ 1 75
Shingles, extra	1 80@ 2 00
Shingles, clear	2 80
Shingles, cedar	1 50@ 2 00
Lath	1 25@ 1 40

AT THE YARDS.

This year trade having been unusually slack during July, the revival will probably be deferred to the last moment. The reasons for this are that prices being low and uncertain, both distributers and consumers will hesitate about purchasing, for fear that prices may go still lower.

Lumber is low enough now, and it would seem to be wise policy to put in such stock for the fall trade as will be absolutely needed before the inconvenience to prompt shipment shall become great.

Under the sluggish demand stocks in the yards have accumulated until most houses have a full assortment. There will always be more or less assorting up between yards, but there is less necessity for it now than for months past. There is less talk than earlier about scarcity of particular sorts. Inch and a quarter high grade lumber is probably as meager in supply as any.

The prices of shingles are considered more certainly at bed-rock bottom than any other stock. A heavy dealer in shingles thinks it a safer transaction to buy shingles than lumber at present prices. He claims that shingles are now so low that mills have been forced to shut down, while saw mills are running wide open everywhere. He argues from this that the demand has at last regulated the supply of shingles, while it has not that of lumber.

LAKE FREIGHTS.

Grand Haven	$ 1 00
Muskegon	1 12½
Whitehall	1 25
Ludington	1 50
Manistee	1 62½
Menominee	1 50
Oconto	1 62½
Cheboygan	1 37½
Alpena	1 75
Bay City	2 00
Tawas	2 00
Frankfort	1 75

Receipts of lumber, shingles, etc., for the week ending July 24, as reported by the Lumberman's Exchange :—

RECEIPTS.

	Lumber.	*Shingles.*
1884	115,118,000	53,254,000
1883	123,231,000	82,440,000

FROM JANUARY 1, 1884, TO JULY 24, 1884, INCLUSIVE.

RECEIPTS.

	Lumber.	*Shingles.*
1884	836,654,000	433,028,000
1883	768,768,000	531,478,000
Increase	67,886,000	
Decrease		98,450,000

LAKE RECEIPTS FROM JAN. 1 TO JULY 24.

Lumber	853,433,000
Shingles	434,797,000
Lath	32,731,000
Posts	2,299,751
Railroad ties	624,924
Wood, cords	15,294
Bark, cords	12,941
Slabs, cords	21,911
Telegraph poles	104,275
Spars	12
Piles	250

STOCK ON HAND JULY 1.

	1884.	1883.	1882.
Lumber & timber	470,292,195	430,375,078	443,039,546
Shingles	295,843,825	246,987,650	223,539,500
Lath	46,889,385	43,612,922	26,691,152
Pickets	1,331,104	1,486,077	1,902,187
Cedar posts	297,545	409,258	154,143

OSWEGO, N.Y.

1¼, 1½, 2 & thicker uppers	$42 00@44 00
" " " " pickings	32 00@34 00
" " " " cutting up	22 00@24 00
" " " " cutting up peckings	
peckings and better	32 00@34 00
1 inch selected sidings	28 00@30 00
1¼ " " "	30 00@35 00
1 & 1½ in. box	12 00@14 00
" " sidings, dressing and better	22 00@25 00
1x10 in. 13 ft, dressings and better	20 00@25 00
" " shipping culls	14 00@15 00
" 14 & 16 ft. dressings and better	20 00@23 00
1x10 in. 14 & 16 ft. ship culls	14 00@15 00
1x12 " " " "	14 00@15 00
" " " dressings and better	20 00@23 00
1½ in. stripe selected	23 00@25 00
1x" " dressings	16 00@17 00
" " culls	10 00@13 00
Ash.	
1st & 2nd, 1 to 4 inch	18 00@22 00
Culls " "	10 00@12 00
Basswood.	
1st & 2nd, 1 & 1½ inch	18 00@20 00
Culls " "	10 00@11 00
Shingles.	
XXX Pine	3 50@ 4 25
XX "	1 90@ 2 10
XXX Cedar	2 90@ 3 25
XX "	1 50@ 2 00
Lath 1½ No. 1	2 00@ 2 25
" No. 2	1 50@ 0 00

BOSTON.

Cotton, Wool and Iron of Aug. 9 says :—General business is moving along slowly, and there is very little change to chronicle. The fall demand has hardly opened up yet. Western pine shows a little more doing. Orders for spruce are being pressed, and sometimes at reduced prices. Yellow pine is as slow and dull as ever. Hardwoods as a rule hold up quite steadily at previous prices.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

TONAWANDA.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$42 00@46 00
Common	14 00@18 00
Culls	11 00@14 00

BUFFALO.

We quote cargo lots :—

Uppers	$45 00@46 00
Common	17 00@18 50
Culls	12 50@13 00

LIVERPOOL.

The *Timber Trades Journal* says :—The deliveries from the quays and yards seem to show some diminution and this would point to a decrease in the demand from the country if the indications at the various wharves and the other shipping depots such as railways, &c., are to be taken as a criterion of the amount of business

that is being done in this neighborhood. The general trade of this neighborhood is in an unsatisfactory condition at present, the disturbed state of the mining and cotton manufacturing districts having no doubt considerable influence upon our trade, and complaints are rife of the want of animation in nearly every quarter.

Prices generally are so low at present that it would seem a favorable opportunity now presents itself for buyers of large quantities to enter the market, as in the face of the rapidly approaching autumn we shall soon have increased rates of freight and insurance put before us.

Some animation will be thrown into the market by the requisition which has just been made by the Mersey Docks and Harbour Board, through their brokers, Messrs. Duncan, Ewing, & Co., for the supply of various quantities of Quebec pine, pitch pine, and other woods, and in putting forth their wants at this time they are doubtless pursuing a wise policy, as prices are very low, and with the exception of some articles a good selection can be made.

On Wednesday, the 23rd July, Messrs. James Smith & Co. offered a cargo of spruce and pine deals, a large quantity of American oak waggon scantling, and also a cargo of Newfoundland yellow pine.

The latter sold at a wide range of prices, considering the wood was to be delivered as landed from the ship, without regard to size, the first lot being sold at 11d. per foot, and gradually dropping down to 7¾d. per foot.

GLASGOW.

The *Timber Trades Journal* says:—Trade here is just now to a great extent suspended, being the annual summer holiday season, which generally continues for a week in the building trades, and for the working classes in general.

This year, however, as some of the shipbuilders have few orders on hand, a number of the yards will not be opened for business until the 4th of August, which we believe will be longer than is desirable by the workmen. The consumption of material and selling by wood merchants will therefore be limited for some time.

A cheering annonncement in regard to shipbuilding, especially for the populace in the east end of Govan, has, however, just been made, being that Messrs. R. Napier & Sons, Govan, have secured an order for two new steamers. They are intended to be used chiefly in connection with the construction of one of the deep-sea cables.

As will be observed from the import list there have been considerable arrivals of timber and deals at Clyde ports during the past week.

The timber trade at the opening of the summer imports have found the accommodation at Yorkhill Wharf, Glasgow (which is the chief depot for storing deals imported to Clyde), inadequate for their requirements. A portion of the wharfage there is set apart for the use of the cattle trade, and a large additional piece of ground in the yard has lately been taken up by this trade, which very much hampers the wood business.

TYNE.

The *Timber Trades Journal* says:—The principal arrivals of wood goods during the last few days have been pit-props and pitwood, of which, whatever may be the demand, there is evidently never a diminution in the supply. There are also two cargoes of prepared floorings from Norway, one cargo pitch pine from Doboy, and the Christiania and Gothenburg steamers with usual assorted cargoes. Most of the sawn deals appear to be going forward into consumption, and the returns published in your last number show certainly that a good and steady trade must be doing. In the building trade, while there is no very great activity, there is no doubt a good steady trade being done, and saw mills are on the whole fairly well employed. In contracting there is also a good deal of work, but in shipbuilding and ironworks there is as yet no sign of improvement.

FOR OLD OR YOUNG.—Dr. Fowler's Extract of Wild Strawberry is the remedy for cholera, cholic, diarrhœa and dysentery. No person is safe without it.

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A MAMMOTH MILL.

Wood and Iron, San Francisco, Cal., speaking of the great mill of Hanson & Co., at Tacoma, W. T., says: This mill is situated on the headwaters of Puget Sound, and is one of the largest and most complete on the coast. It is 450 feet long, 80 feet wide, and has a capacity of 225,000 feet of lumber and 60,000 lath per day. It has all the latest improved machinery, including steam feed gangs, scantling machines, live rollers, etc., known to the lumber manufacturing community. In this mill timber 150 feet in length and of the largest size can be sawn as readily as a lath, so complete and perfect are all its workings. On the Tenino and Olympia railroad the company control numerous logging camps, from which is procured the finest timber and spars in the world. There is now being shipped from this mill a full cargo of spars for the Chinese market, this cargo following a former one of sawn timber from 12 by 12 to 26 by 26, seventy feet long and upward, from same mill and for same market. At Tacoma they own fifty-four dwelling-houses, occupied by their employees. These houses are built with all the modern conveniences, and partake of the attractiveness of a well-regulated home. The company also run, in connection with their lumber business, a mammoth store, carrying an immense stock of dry-goods, groceries, hardware, boots and shoes, shipchandlery, etc. In connection with the office of the mill and store is a telegraph office, giving them all the wire accommodations of the day. Four vessels, ranging from 700 to 1,200 tons, belonging to them, are engaged in carrying lumber to different ports, while from four to six vessels loading for foreign ports are constantly at the wharf, carrying in quantity from 500,000 to 1,500,000, and the steam tug Tacoma, the strongest tug on the waters of the sound, is kept busy. The firm also has a fine mill at Redwood City, which has a daily capacity of 20,000 feet. In all of this firm's enterprises over 1,000 men are constantly employed the year round. This gigantic business, with all its branches and workings, is managed, conducted and handled by one man, Mr. Charles Hanson, the founder of the enterprise, and the only person composing the firm of Hanson & Co.

POWER FROM NIAGARA FALLS FOR ELECTRIC LIGHT.

The correspondent of the New York *Sun* has received a letter from Leonard Henkle, inventor and electrician, of Rochester, saying that although the action of the New York Legislature in favour of the National Park compels him to abandon Prospect Park and the American side of Niagara for electric lighting purposes, he has nevertheless negotiated for the purchase of land on the Canada side of the river and for power from the great Horseshoe Fall for carrying out his original plan. That plan contemplated the lighting of sixty-five American and Canadian cities, connected by means of underground cables with electric lights generated at Niagara. The plans are all drawn for ten hydraulic engines of 200,000 horse power each, and gigantic machinery. That Henkle himself means business is attested by the fact that he will soon open an office on the Canada side of the river, and endeavour to complete arrangements with capitalists, whom he expects to furnish $22,000,000 for the undertaking.

UNITED STATES FORESTS.

The New York *Commercial Bulletin*, speaking of the value of the forests of the United States, says the same influences are at work in that country as R. W. Phipps have shown have led to such unfortunate results in the forests of Canada. Valuable timber, either through ignorance or criminal carelessness, has been outrageously wasted, and more rational views as to the immense value of the forests are urgently needed. The forest wealth of the United States at the lowest calculation outmeasures the value of the entire corn crop of the country, is a third more than the value of the wheat returns, exceeds the aggregate value of the hay, rye, oats, barley, buckwheat, potatoes, and tobacco, and is ten times as valuable of the product of all the mines of gold and silver in the country.

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FOREST DENUDATION AND WATER POWER.

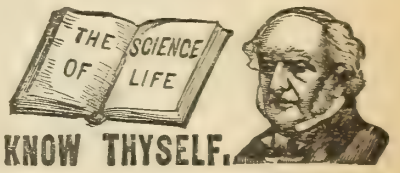
The effect of forest denudation at the headwaters of the Hudson river shows itself even earlier this season than it did last, and is seriously interfering with the water power along that stream. The Glens Falls *Republican* says:—"The first trouble occurred on Tuesday night, June 1, when one mill on the south side of the river was compelled to stop for lack of motive power. Since then they have run a majority of the time, but at periods quite slowly. After the rain on Tuesday matters mended somewhat but not permanently. Last year the mills continued in full operation until about July 15. The dearth of water began this season earlier than ever before, according to the recollection of a veteran sawyer who speaks from 25 years' experience. The necessity of building reservoirs at the head waters of the streams which feed the Hudson becomes every year more apparent." The safest and best reservoir which can be built in the Adirondack region is to prevent any further forest denudation there, and reafforest that portion already denuded.—*Lumberman's Gazette.*

ANY visitor to Buckingham Landing, who takes an interest in mill matters, cannot fail to admire the well ordered little saw mill which is conducted there by Mr. Erince for the Diamond Match Company of Westville, Connecticut. This is supposed to be the largest match company on the consinent, and some years ago bought up many manufactories in Canada and the States. This little mill has a capacity of some 400 to 500 logs per day, and is run with comparatively very few hands, it being one of the best ordered and most conveniently arranged saw mills, mechanically, in the district. Pine and spruce deal and board lumber is sawn for the American and local markets, and the waste lumber is cut into match blocks.

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There is no member of society to whom this book will not be useful, whether youth, parent, guardian, instructor or clergyman.—*Argonaut.*
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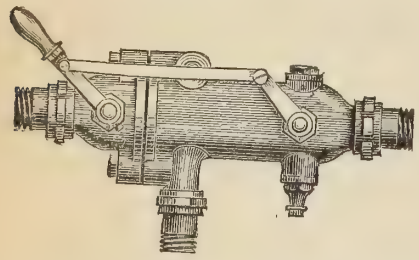
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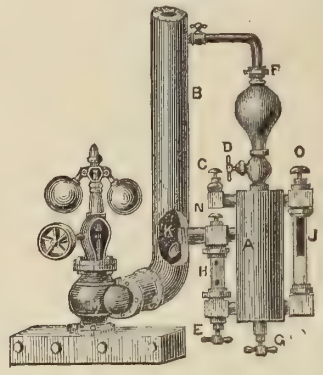
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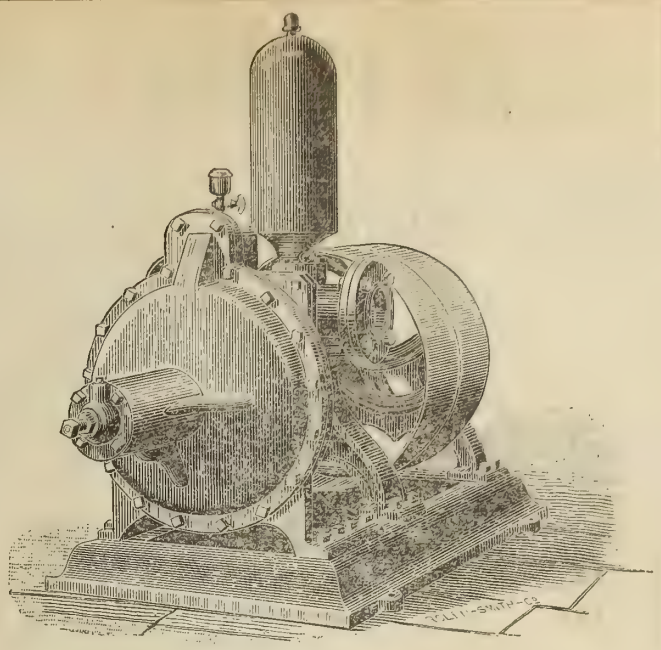
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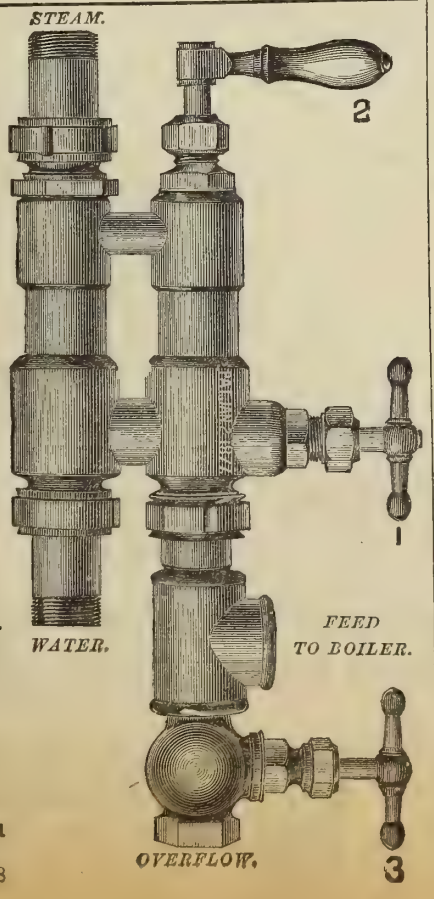
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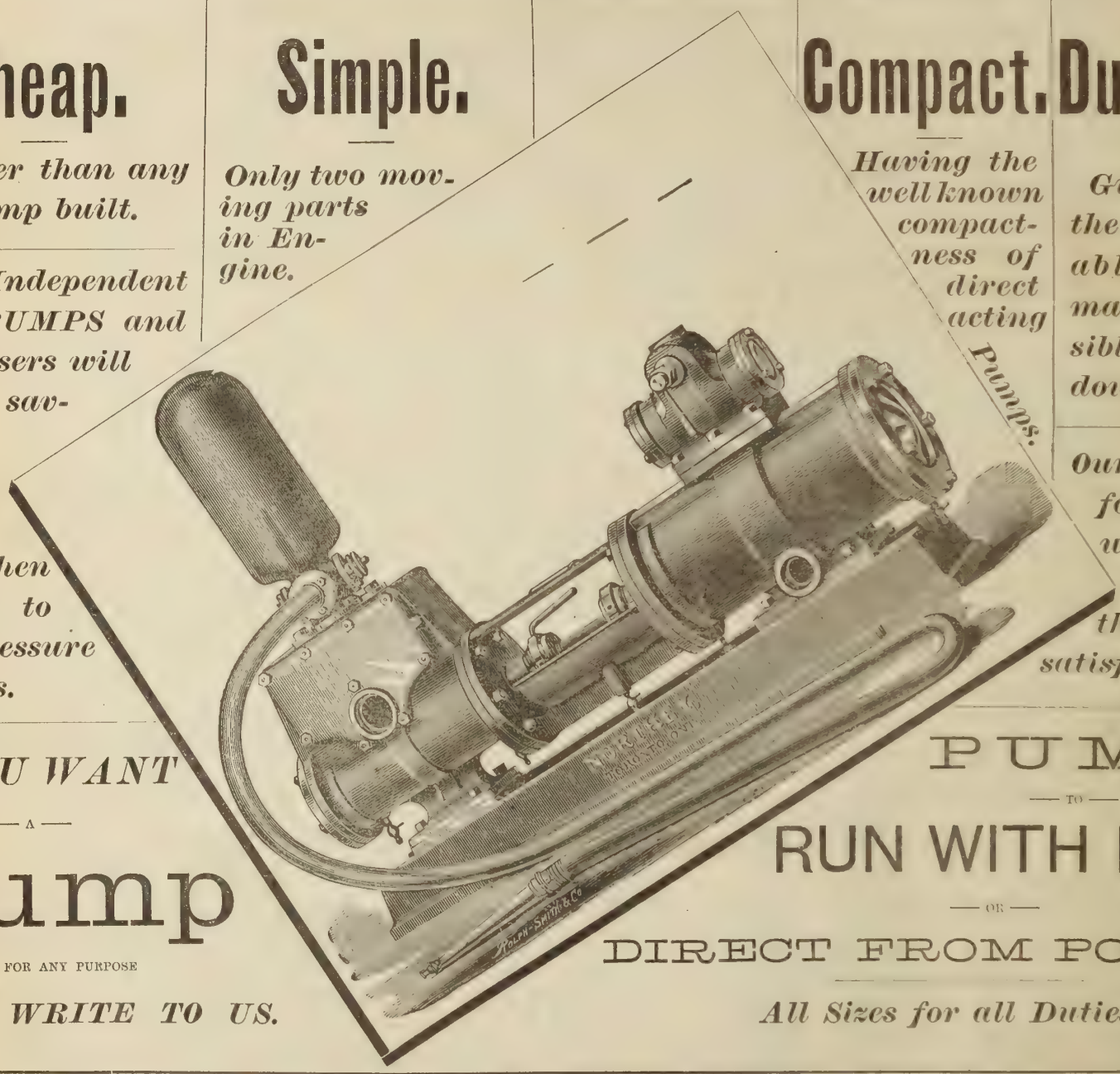
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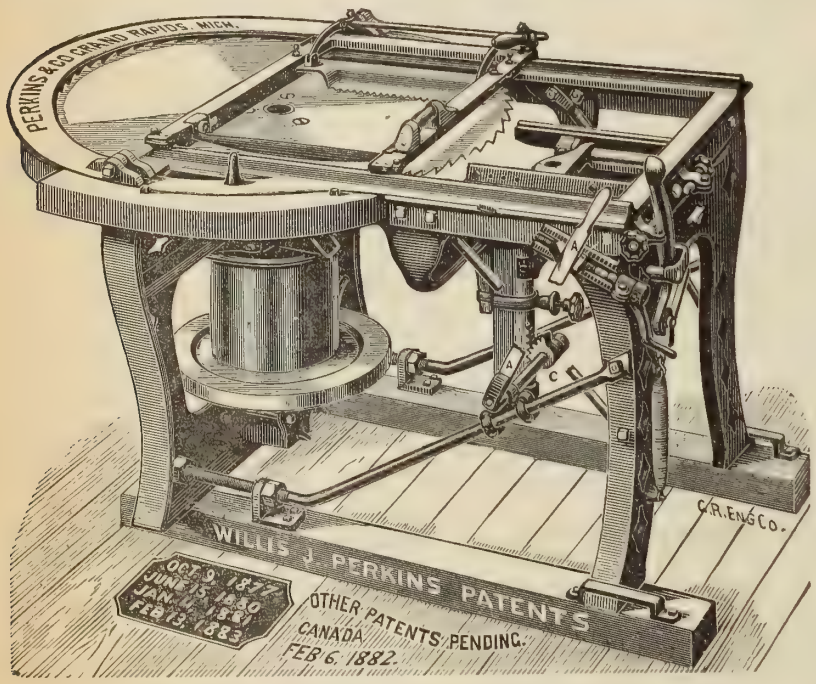
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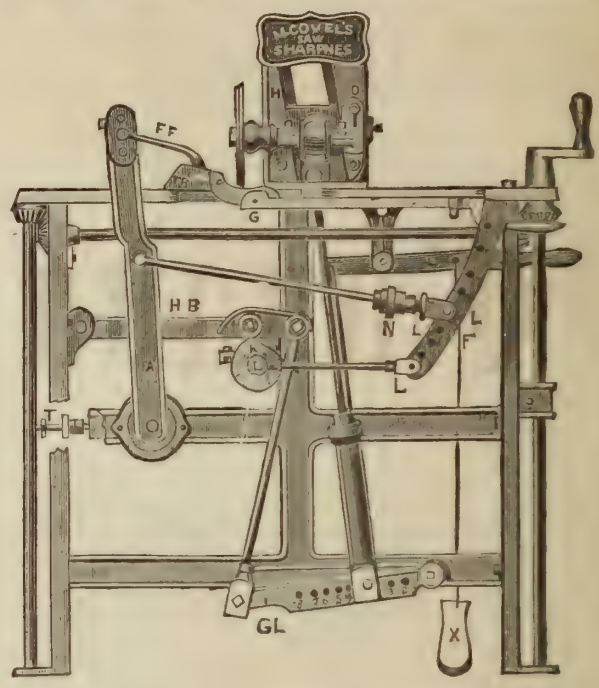
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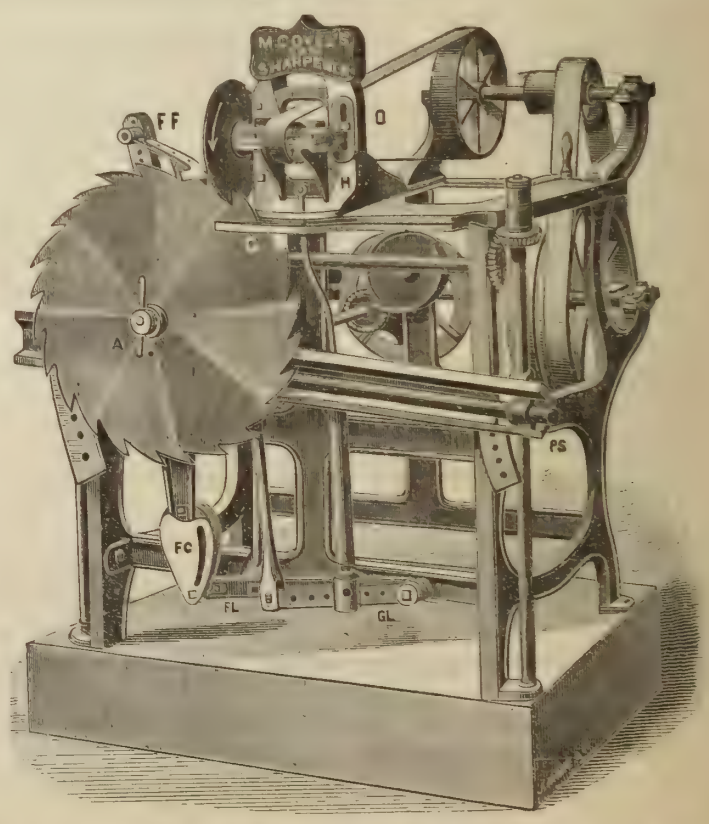
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VOL. 4. PETERBOROUGH, ONT., SEPTEMBER 1, 1884. NO. 17.

FOREST DEVASTATION IN NORWAY.

We take the following from Dr. John Crombie Brown's "Forestry in Norway:"

"The reports of forest officials all ring the changes on the same topic, the rapid disappearance of the forests, especially those of fir. They report that the Government must do the work itself; nothing or little can be expected from private proprietors; only one of the latter is spoken of approvingly as maing a movement in the right direction.

The rights of pasturage are reported to be a great obstacle, as the young trees must be fenced in order to protect them from sheep, which in Norway seem to be very agile in that particular part of the west coast, needing a higher fence than usual. The expense of fencing falls, of course, on the improving proprietor. One writer says Government should interfere on this point, for nothing will be done so long as sheep can roam at large. Another brings the same complaint against cattle.

It is recommended that the heath under the trees should be cut down when there is a good seed year, as it chokes the young plants. Another suggests that all woods attached to clerical or other offices should be resumed by Government; their extent is small, but the operations would give instructions to proprietors in the neighborhood. In some places land is cheap, and could be bought to advantage, in others it is very much subdivided, and difficult to obtain.

All write gloomily, and the only hope is in the Government buying and replanting large stretches, and limiting the rights of pasturage.

It is recommended further, that Government officials should be required to assist all who wish their help in making attempts at forest culture. In general the people only care for money, and are careless of the future, with, of course, cheering exceptions. One English company, it is reported, has been hewing down at a great rate.

Something similar may be said of the reports on the economical condition of the kingdom, made by the prefects of nineteen prefectures, and a report of the same to the king by the Department of the Interior, with copies of the administrative instructions, and forms of tabulated returns required, and copies of tabulated returns received in regard to agriculture and cattle, including meteorological observations, in regard to fishing and the chase, in regard to industrial occupations and products, in regard to commerce, navigation, and roads, and in regard to finance and financial conditions for the years 1861-1865; and there are given official reports on the economic conditions of the several prefectures for the years 1866-1870.

In the report on the forest condition of Lister and Mandal—a report made to the Department of the Interior by Forest-Assistant Aars, published in successive numbers of the *Christiansand Stiftfavis* in the latter months of 1870, the whole series is charged with most interesting minute local descriptions; but the burden of the whole is complaint of the disappearance of the forests. The first district mentioned, Vauso and Herred, is described as subject to inundations of drift sand; and the planting of the ground with trees, and the covering of the sand with sea-weed are suggested as remedial measures, the adoption of which is urgently called for. Of the Praestergjeld, or parish of Fjotland, the clergyman writes that "things are bad and every day becoming worse; as time goes on every stick growing will be converted into money, and then——?" From another district the clergyman writes that there is no hope unless the Government come forward and purchase the remaining forests. From a third district the clergyman, after pouring out a large Jeremiad of lamentations, winds up with a like suggestion as the only measure likely to prevent utter devastation; and from the *Praestergjeld*, or parish of Siredalens, the report is that the destruction of forests has been carried so far that even the interposition of the Government could effect nothing in preventing desolation, as some places must ere long be almost uninhabitable.

The report was furnished to me by the Government; it is in exact accordance with what I have seen of the results of reckless felling elsewhere.

THE AUSTRALIAN TRADE.

Some interesting statistics have been compiled with regard to the growing trade between Australia and the United States. In the year 1883 the United States exported to Australia $352,000 worth of agricultural implements, $225,000 carriages and carts, $242,000 drugs and medicines, $1,203,000 from manufactures, $252,000 steel manufacrures, $111,000 leather and manufactures of leather, $555,000 kerosene, $370,000 fish, $169,000 sewing machines, $796,000 tobacco, $224,000 lumber, $229,000 household furniture, and $234,000 manufactures of wood. The total export amounted to $6,730,000, which is an insignificant sum compared with the total value of British exports to Australia, amounting last year to $91,000,000. Although England is nearer to Australia than America, the latter yet hopes to do a large trade with our distant colonies, as there are many articles which could be produced and sent out at a greater advantage. The Australian export to the United States is at present very little, amounting only to $2,088,000 in the aggregate for 1883. Some fears have recently been expressed with reference to wool-growing in Australia, the staple industry, but the Federal Australian does not share in the evil forbodings. At the same time it urges the desirability of seeking new outlets for Australian wools in countries like China and Japan and some of the European centres. "We have done this," remarks the journal in question, "not because we labored under the jaundiced impression that the English market was likely to be glutted with American wools this year or next, and that the price of the Australian staple would fall 22 per cent. in consequence, or that our ideas of the present and following season's clip were so buoyant as to lead us to believe that the immense surplusage would create a panic in prices in the London market, but simply because we see that as the development of western Australia, the northern territory, and Queensland proceeds—and it has been going on rather rapidly of late—a large increase in the staple may be reckoned upon." In 1872 122,256,496 pounds of wool was imported into America. In 1882 the quantity imported was 55,964,236 pounds, while the population had increased from 38,500,000 to 50,000,000. This great falling off in imported wool would appear alarming and perplexing were it not for the fact that in 1870 the amount of the domestic-grown wool in the United States was only 100,102,387 pounds, while in 1880 it had increased to upward 200,000,000 pounds. Australia does not fear this increase, as the quality of wool grown in the States can not compete with that grown in the colonies. Owing to the nature of the soil in many of the American States it would not pay the farmers to turn their attention to wool growing instead of the cultivation of cereals. And, as a matter of fact, great as has been the increase in wood-growing in America it bears no proportion to the enormous increase in the production of other articles. As Australia and America are nearly alike in superficial area, and as the territory of the latter is being rapidly utilized for cereal and cotton products, while the more distant continent—or such portion of it as is settled—is nothing but a huge sheepwalk, there is no danger for some time to come of Australia losing her supremacy in wool-growing.—*London Times.*

LUMBER NOTES.

Under the head of "Logging Notes," a St. John paper, of August 2nd, states that Mr. Robert Connors does not agree with the opinion of Mr. Gibson, the lumber king, that there is as much spruce lumber in the Province of New Brunswick now as twenty years ago. He states that in many districts of the Province, where lumbering was formerly carried on heavily, log-cutting has been totally abandoned of late years, as the difficulty of working in the woods becomes more and more difficult every year. The logs are becoming scarcer, smaller and more remote from the streams. It takes fully 100 years for the spruce tree to reach its growth, and when it grows on burnt land it never reaches its natural size. Mr. Connor believes, however, that with moderation in the annual output the spruce forests will be available for use for many years to come. A correspondent of the *Northwestern Lumberman*, writing from Midland, Ont., last week, declares that bill stuff and coarse lumber are about 50 cents to $1 lower than in the spring, but good lumber is steady at about last season's prices. Lath has been good, and up to last year, but now it is dropping. Shingles, 18-inch, have declined from 50 to 30 cents, and 16-inch about 25 cents. "There will not be nearly so much lumber made here this year as last. There are several mills idle that have not run any, and the Parry Harbour mill was burned lately, which shuts off about 15,000,000 there. There are about 10,000,000 feet of logs hung up on the Muskoka and Maganetawan that will not come out, and about 10,000,000 more in the Muskoba that will come out too late, if they come at at all. There are also about 400,000 cubic feet of square timber hung up on the above rivers, intended for the Quebec market."—*Monetary Times.*

FAILURES OF THE LAST SIX MONTHS.

Several large disastrous failures have been reported recently by the mercantile agencies. The reason of these failures has been the over-stimulating of production, the drop in prices, inability to realize on stocks, and other purely trade causes. Looking over the list of failures for the past six months, it is seen that the majority are of traders doing business with a capital of $5,000 to $10,000. This class of traders suffer more than the larger ones, and their suffering is due to a great underlying cause, to which too little attention is given, viz.: that this is an age of centralization. Large concerns are eating up the little ones. We see the consequences of combination on every side. Thus, limited capital is less able to stand pressure than is large capital. Small traders will slowly disappear; in a few years, if this tendency continues, we shall see immense concerns in every department; immense farms made up of numerous small ones; immense factories built with the money that otherwise would have been expended in a multitude of small ones.—*Southern Builder and Manufacturer.*

THE AU SABLE NAVIGABLE.

During all the years that lumbering has been conducted on the Au Sable river it had never yet entered the head of any person until the present season that that stream was navigable, but David Cameron has demonstrated the fact pretty satiacterily that it is or can easily be made so. Mr. Cameron passed Mioe recently on a flatboat, having 13 tons of provisions for the J. E. Potts Salt and Lumber company. This was an experiment to demonstrate that the Au Sable would be navigable for flat-bottomed steamers from Grayling down. It is also stated that Mr. Cameron has contracted to deliver the iron for the Potts railway, and that he will float it all down the river.

PINE PROBABILITIES.

Lathrop E. Reed, of the firm of Reed & Sherwood, has been interviewed by the representative of the St. Paul *Pioneer Press*, in regard to the decimation of the pine forests of Minnesota, and that gentleman has very little fear of an early pine famine; and although his statements lack any good argument to sustain his views we give them to our readers because of facts and figures contained, which have little bearing on the question which he pretends to discuss, but which of themselves are worthy of consideration. He says:—

"I can hardly understand what has occasioned the impression of a pine famine, but it is, perhaps, the immense consumption of pine lumber. Don't you know that in St. Paul alone last year 100,000,000 feet of pine lumber was used in building? In two cities, St. Paul and Mineapolis, about 150,000,000 feet will be worked up this year. However, even at this rate there is pine timber enough in Minnesota to supply the demand for 25 years yet, and may be much longer. Why, pine lumber is almost as cheap here now as it was in 1857, which don't look like a famine. You see, in cutting pine logs only the larger trees are taken—nothing that will square eight inches at the smaller end. Then in six or eight years the smaller trees have grown so that they will do to cut, and in eight or ten years yet a third cutting can be made. You must understand, however, that once all the small trees have grown up and been cut down, there is an end of your forest, the pines don't sprout from the roots as some other trees do.

It is a fact that the growth of the pine trees, so long as any are left to grow, more than pays the taxes on the land every year—almost the interest on the investment. In fact, extra pine land accessible to creeks is now worth from $15 to $20 per acre, and good can be bought at $10 to $15. Standing trees are worth $3 to $5 per thousand sold by 'stumpage,' and it costs from $4 to $5 per thousand to cut and drive, so the logs cost delivered here $7 to $10 per thousand. The 'stumpage' measurement involves some peculiarities. It is a computation of the number of feet of lumber in a tree by applying the rule across the stump, and this decision is final in all cases of dispute or trespass. Also, in case the actual trespassers are not financially responsible, the parties to whom they have sold logs or lumber are held for the obligation. From records preserved in the surveyor general's office it is easy to trace logs that have been cut three or four years, and wherever found they or their product can be seized by the original owner of the land without allowing anything for cutting, driving or sawing up. So you see it behooves dealers to buy of responsible parties. But, with the Rum and Mississippi rivers regularly bringing down two hundred to three hundred million feet of logs every year, to say nothing of other sources of supply, I think you may safely assure your readers that there is no danger of a pine famine for a good many years yet."

THE TIMBER TRADE OF AMERICA.

Prof. Rothrock, of the Pennsylvania University, in speaking of the danger of a timber famine, says that the area of the United States, including Alaska, is 2,306,560,000 acres. Of this, it is stated officially, 380,000,000 are in woodland chiefly belonging to private parties, In other words, taking our area as a whole, we have about sixteen-and-a-half per cent. remaining in forest growth. Of this, we must remember, that a large proportion represents lands which have been cut over, and are now covered with immature growth of good timber, or with trees of such kind as have no commercial value. It will, no donbt, be surprising to learn that as a whole, Europe has twenty-eight per cent. of its area remaining in forest. This, however, is very unevenly distributed, and, to be of further use as a point of comparison, we must examine into the timber statistics of each important district. The percentage taken in this are: Sweden and Norway, forty; Russia, thirty-nine; Austro-Hungary, twenty-three; Germany, twenty-three; Switzerland, nineteen; Italy, seventeen; France, sixteen; Belgium, twelve; Spain, eleven; Portugal, six; Great Britain and Ireland, about three. None of those countries which have less timber land than above seventeen per cent of their total area have sufficient wood to get along with. They have to import. Making, as far as I can, due allowance, and testing my results by various standards, I am now prepared to assert that we are in danger of a timber famine at any time our forests fall below fifteen per cent of the entire area of the country. At this hour, so far as I can estimate, we have not more than 16.47 per cent. This gives 1.47 per cent between ourselves and want, so far as our industries are concerned. Of all civilized countries driven to make the largest use of iron and to exercise the greatest economy in wood, Great Britain heads the list. Here then we might suppose there existed the greatest ability to dispense with it. Her importations of wood were valued at $77,963,399 a year from 1872 to 1876, or $2.50 worth for each soul per annum.—*Canadian Manufacturer.*

NEW BRUNSWICK LUMBER.

The St, John *Telegraph* has the following:

At present there are in port, loading deals for Alex. Gibson, ten vessels, four steam and six sail will clear for sea, carrying fully 2,500 standards of deals. The cargoes of the vessels still remaining will amount to 2,660 standard more. Up to date, lncluding vessels now loading, it is estimated that Mr. Gibson's shipments amount to 62,000,000 feet of deals, carried in 68 vessels, 37 of which are steamers. On the first of August last year 66,000,000 feet of lumber had been shipped by him during the season to that date.

It is interesting in this connexion to note the extent to which the steamers have cut into the traffic formerly monopolized by sailing vessels. As regards the shipment of this large operator the following will illustrate the manner in which the steamers are superceding sailing vessels in the deal carrying trade:—

	Sail.	*Steam.*
1880	97	0
1881	83	11
1882	97	29
1883	94	23
1884 (estimated)	50	50

The figures for the present year are of course conjectural as to the future but are based on reliable estimate. As two steamers on the average carry as much lumber as five sailing vessels, the extent of the inroad upon the trade of the latter can easily be comprehended. Taking the estimate of Mr. Gibson's shipments for this year at 90,000,000 feet, the amount carried by each would be:—

	Feet.
Steamers	65,000,000
Sailing ships	25,000,000

In 1882, two steamers alone, the Missouri and the Kansas, carried away no less than 3,000,000 feet of deals.

Mr. Gibson is handling a stock this year that will approach very closely his heavy operations in 1877, 1882 and 1883.

The Nashwaak crop this season amounts to 29,000,000 feet of logs, of which 12,000,000 have reached St. John for shipment. From Randolph & Baker this spring he bought 10,000,000 feet; from George Barnhill 3,500,000 feet; from Geo Eaton, Shulee, 4,000,000 feet; from W. H. Murray 4,000,000 feet, while F. Tufts & Co., his agents, have purchaced about 15,000,000 feet from operators on both sides the bay. All the lumber which comes from St. John for Mr. G. is surveyed by Messrs. Sulis & Courtenay, who keep an accurate record of the operations for each year. These exhibit the following figures for the past nine years:—

	Sup. Feet.	*Vessels.*
1875	68,874,983	94
1876	93,508,549	126
1877	104,479,813	141
1878	71,867,790	87
1879 (estimated)	25,000,000	30
1880	76,926,008	97
1881	80,501,843	94
1882	110,152,527	126
1883	97,588,718	117

Ten years ago the Anchor Line steamers were occasionally chartered to carry deals, but the discriminating tariff of ship laborers made the expenses too heavy to leave any profit in the trade.

In former years, notably last season, nearly all the mills in St. John were employed on large contracts of sawing for Mr. Gibson. This spring only two of them are sawing his logs; R. A. Gregory's mill, Carleton, and Cowan & Gaskin, above Indiantown. All the logs cut on the Nashwaak are sawed in the Marysville, Robinson and Morrison mills.

THE UNITED STATES BUSINESS OUTLOOK.

From a state of panic, a few weeks ago, the New York banks are now described as "the personification of health and strength." Recuperation is going on. The severe contraction of credit, if unpleasant in its operation, has had a good effect. The deposits in the savings banks are increasing. The yield of wheat is expected to be 500,000,000 bushels, against 400,000,000 last year; and the estimated surplus for exportation is 150,000,000 bushels. Farmers would better off if they received 80 cents this year than $1 last year would have made them. The actual price is about twenty cents lower than last year; but then speculation had sent it up abnormally, whereas it is now at a figure which admits of exportation. Short time has improved the condition of the coal trade; a very doubtful improvement for the general public. Speculation is not now active, and future trouble from that source need not be dreaded. On the whole, things look fairly well far our neighbors.—*Timber Trades Journal.*

FACTS ABOUT LEAVES.

As is well known, a tree cannot grow without leaves. These are put forth every year, and are a contrivance for vastly increasing the surface. An oak tree of good size exposes several acres of surface to the air during the growing season. It has been estimated that the Washington elm at Cambridge, Mass., not a very large tree, exposes about five acres of foliage, if we include both sides of the leaves. Leaves are more nearly comparable to stomachs than lungs. A leaf is a laboratory for assimilating or manufacturing raw materials into plant fabric. The cellular structure of the leaves, wood and bark of a tree is a complicated subject to treat in a popular way. It requires a vast surface of leaves to do a little work. By counting the leaves on a seedling oak, and estimating the surface of both sides of each, we can see how many inches are needed to build up the roots and stems for the first year. After the first year the old stem of the oak bears no leaves. It is dependent on the leaves of the branches, or its children, for support. A tree is a sort of community, each part having its own duties to perform. The root hair takes up the most of the nourishment. The young roots take this to the larger ones, and they in turn, like the branches of a river, pour the flood of crude sap into the trunk, which conveys it to the leaves. The assimilated or digested sap passes from the leaves to all growing parts of the plant, and a deposit is made where most needed. If a branch is much exposed to the winds, the base of it has a certain support or certain amount of nourishment. So with the trunk of a tree. If the base of a branch or the main trunk is much exposed to the winds and storms, as much thicker deposit of food is made there. The winds give a tree exercise, which seems good to help make it strong. Our toughest wood comes from trees growing in exposed places. The limbs of a tree are all the time striving with each other to see which shall have the most room and the most sunshine. While some perish in the attempt, or meet with only very indifferent success, the strongest of the strong buds survive.

Michigan Forest Fires.

DETROIT, Aug, 25.—Harman City, Michigan, was destroyed by forest fires yesterday; two buildings escaped destruction. The dock was also burned. This property belongs to Harman & Crowe, of Cleveland. Harman City is in the new country of Arenic, just south of Tawas City, on the shore of Saginaw Bay. Four fires are still burning in the townships adjoining East Tawas, although a slight rain on Saturday partially stayed their progress. A two hours' heavy rain storm quenched the fires along the Port Austin division of the Port Huron and Northwestern Railway on Saturday morning, and all danger there is considered over.

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, Aug. 19, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., Washington, D. C.:—

303,787.—Wilhelm Arnold, New York City, insertable saw tooth.

303,909.—Melow Bancroft, Whitestown, N. Y., clamping machine.

303,621.—Ledyard Colburn, Derby, Conn., gearing.

303,819.—John T. Cunningham, Wheeling, Va., boat wheel.

303,925.—Wm. H. Doane, Cincinnati, Ohio, circular sawing machine.

303,720.—Chas. W. Gage and A. S. Homes, N. Y., saw.

303,639.—Freeman Hanson, Bar Mills, assignor to H. W. Palmer, Hollis, Me., Lathe for turning polygonal forms.

303 642.—John H. Ingam, Ayers, Ala., water wheel.

303,861.—Peder O. King, Valley City, Dak., combination tool for carpenters.

303,938.—Jno. M. Lowry, Jonesborough, Ga., sash fastener.

303,882.—Merritt W. Palmer, Holland, Mich., windmill.

303,950.—Granville Rowell, assignor to Tubular Saw Co'y., Manchester, N. H., Tubular saw.

303,677.—Bernard T. Setter, Utica, N. Y., match split clamp.

303,781.—Thos. Wise, Framingham, Mass., Rotary steam motor.

303,600.—Phillips Abbott, Brooklyn, N. Y., machine for covering boxes and covers.

303,420.—Stephen Cox, Bridgeton, N. J., lubricator.

303,425.—Henry Teigh, and J. L. Murphy, assignor to L. Powers & Co., Philadelphia, Pa., planing machine.

303,281.—Ross J. Hoffman, Binghampton, N. Y., lubricator.

303,283.—Albert D. Howe, Coshocton, Ohio, axle lubricator.

303,374.—Charles Hownid, Jackson, Mich., tool for turning round tenons.

303,314.—Chas. E. Newart, Boston, Mass., machine for sharpening pencils.

303,320.—Wm. J. Powell, Marsfield, [illegible], miter box.

303,463.—Vincent Seiler, Redding, Ohio, saw set.

303,338.—John F. Taber, and W. F. Gibbs, Clarion, Iowa, bench plane.

303,478.—Granville W. Wright, assignor to Sargent & Co'y., New Haven, Conn., tool handle.

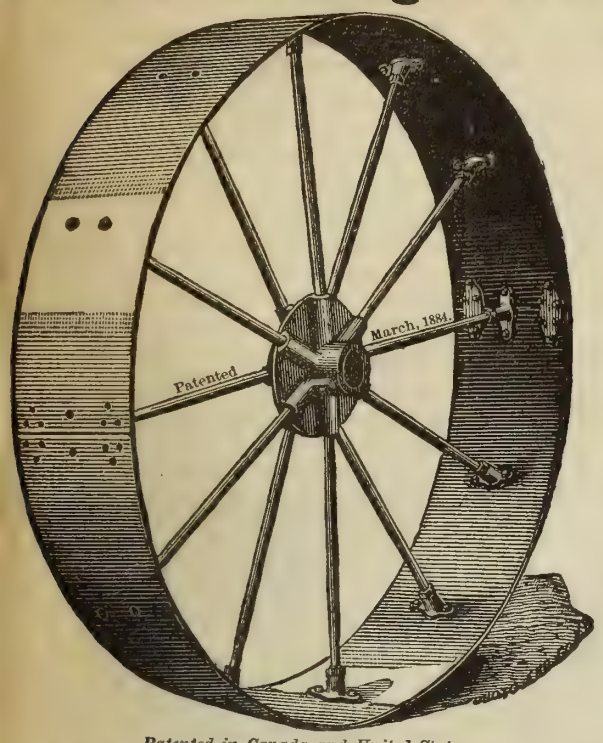
Tree Planting in the Northwest.

One of the measures before the Northwest Council, now in session, is the introduction of an ordinance providing for the encouragement of those who will undertake the work of planting out trees on the prairies, both for the purpose of raising timber belts on such portions as are of little value for cultivation, and to create wind-breaks around homesteads and along the roadsides for shelter and shade. In either case it is most desirable that the encouragement to be given should be of a liberal nature. There is nothing, we believe, in either the climate or the soil to militate against success, except that the varieties of trees to be tried should be those best adapted to exposure. The experiment need not be a costly one, and a beginning might be made by planting out those sorts that are indigenous to the country or to localities with a winter climate equally as cold.—*Calgary Herald.*

American Forestry Congress.

A circular has been issued by Mr. B. E. Fernow, corresponding secretary, calling attention to the annual meeting of the American Forestry Congress, which will be held this year at Saratoga, N. Y., on 16th Sept. The denudation of the forests of the Adirondack region concerning which there was so much discussion in the New York newspapers last summer, will form the subject of several debates. Among the subjects of special interest to Canadians will be "Canada's Method of Lumbering."

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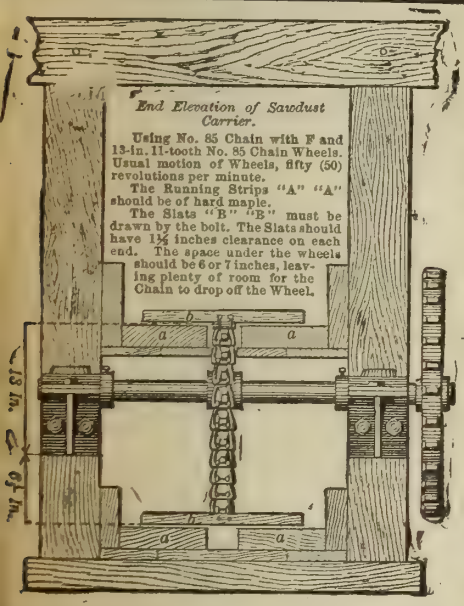
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90 inch Pulley, 16 inch Face, Weight 615 lbs.
48 " " 20 " " Double Arms 575 lbs.
55½ " " 12 " " Single " 273 lbs.

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The Running Strips "A" "A" should be of hard maple.

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Transmits power for slow motions without slipping, stretching, &c.

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Sawdust, Slab and Offal Carriers, Log Jacks,

Loading Logs lengthwise on Cars.

Loading Ties endwise and Telegraph Poles lengthwise on Cars, or vice versa on Cars or Vessels.

USEFUL TO MOVE ALMOST EVERYTHING

If doubtful whether or not it will apply to yovr wants. Send for information giving ull particulars.

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SAVE YOUR TIMBER, (making the price of a saw every fifteen days) by using our Thin Saws,

60 INCH DAMASCUS Tempered Saws, 9 and 10 guage, guaranteed at 800 revolutions or less, six to eight inch feed or less.

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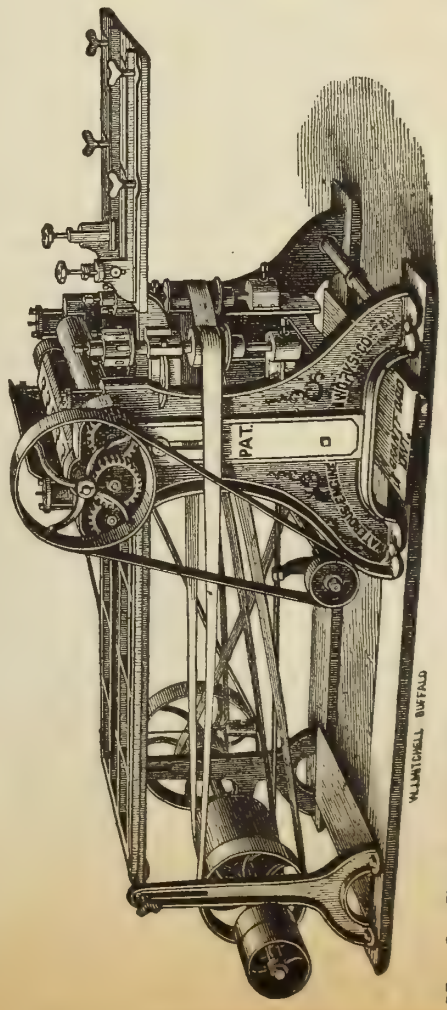
Many of the above are endless, and are the second belts to same parties, ordered after thorough trial. Try a **GANDY BELT.** Address the Sole Canadian Agents,

60	feet,	13	inches	wide,	8	ply.	84	feet, 26 inches wide, 8 ply.	
49	"	18	"	"	8	"	57	" 20 " " 8 "	
49	"	12	"	"	6	"	49	" 11 " " 8 "	
103	"	22	"	"	8	"	47	" 12 " " 6 "	
52	"	20	"	"	6	"	73	" 20 " " 8 "	
101	"	18	"	"	8	"	51	" 16 " " 8 "	
52	"	18	"	"	8	"	37	" 16 " " 8 "	
36	"	12	"	"	8	"			

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The Economist Planer & Matcher (Combined)



No. 1—Surfaces 24 in. wide to 6 in. thick. Planes and Matches 18 in. Wide
No. 2 " 20 " 6 " " 14 "

Strong! Durable! Light! Cheap!

Of the Greatest Capacity and Exceedingly Handy. Send for Circulars, and mention this paper.

The Waterous Engine Works Co.
BRANTFORD CANADA.

LUMBER WASTES.

The following letter appears in the *Timber Trades Journal* :—

Having noticed several articles in the *Journal* calling the attention of millowners to the value of lumber wastes if properly manipulated, I think it possible that a statement of the results obtained after several years of labor in this direction may not be out of place. As has been heretofore stated, wood, whether in the form of logs, slabs, or sawdust, contains 75 per cent. of its weight of volatile matter, the remainder being carbon. If this be subjected to destructive distillation in closed vessels and the gases and vapors conducted through suitable pipes and cooled, the liquids condensed are found to be equal in weight to about 40 per cent of the wood and to be composed of a mixture of pyroligneous acid, tar and water, about 25 per cent being left in the retort in the form of charcoal, the balance of 35 per cent passing off as uncondensable gas. The composition of this gas, which is inflammable, will be hereafter noted. Before proceeding farther, I beg to differ with some of the writers in the *Journal* in regard to the salability of pyroligneous acid and the various products derived therefrom. On the contrary, my experience is that there is very little demand for the various acetates derived from pyroligneous acid. But if these volatile products be decomposed and converted into a fixed gas and mixed with the gas necessarily produced, we have a product composing 75 per cent of wood which supplies a constant want in every location, namely, light. In order to produce illuminating gas, wood in the form of sawdust is found to be better adapted than almost any other material, for reasons which will become obvious as we proceed. That wood can be used to produce illuminating gas will be seen by the following, taken from Ure's "Dictionary of Arts and Manufactures": "If pieces of wood be placed in a glass retort half filled with boiling quicksilver at a temperature of 600° F. (at which quicksilver boils), a black lustrous charcoal is left and the gas evolved is composed of :—

Carbonic acid	56.4 per cent.
Carbonic oxide	36.6 "
Light carbureted hydrogen	7.0 "
	100.0

If, however, the vapors and gases produced as above be heated to a considerable higher temperature, the volume of permanent gas is considerably augmented, while such an amount of hydrocarbons is produced as to render the gas actually richer in these constituents than coal gas. The illuminating value of the hydrocarbons was found to be one half greater than an equal volume of olefiant gas. These observations prove that wood gas is indubitably entitled to rank among illuminating agents. The following analysis shows the composition of wood gas made on a manufacturing scale ; No. 1 being sample before purification at the works of the Munich Railway ; No. 2, after purification at the town of Bayreuth :—

	No. 1				
Hydrocarbons	6.91 %	equal to	9.74 %	olefiant gas.	
Light carbureted hydrogen	11.06	do	do	do	do
Hydrogen	15.07	do	do	do	do
Carbonic oxide	40.59	do	do	do	do
Carbonic acid	25.72	do	do	do	do
Nitrogen					
	99.35	do	do	do	do
	No. 2.				
Hydrocarbons	7.76 %	equal to	11.93 %	olefiant gas.	
Light carbureted hydrogen	9.45	do	do	do	do
Hydrogen	18.43	do	do	do	do
Carbonic oxide	61.79	do	do	do	do
Carbonic acid	2.21	do	do	do	do
Nitrogen	.42	do	do	do	do
	100.00	do	do	do	do

"The gas is entirely free from all sulphur and amonia compounds, and possesses, according to Liebig and Steinheil, an illuminating power greater than coal gas in proportion of 6 to 5."

While it is not new to produce illuminating gas from wood, the writer has been able to learn of but one other instance where advantage is taken of the finely divided state in which wood exists in the form of sawdust for manufacturing gas, and this seems to be of very recent date. Without discussing merits and demerits of this process, we will proceed with a description of the apparatus and process which has been found to produce the maximum results at a minimum cost. The sawdust being fed into a hopper falls into a horizontal pipe provided with a piston working with an intermittent motion, which feeds the sawdust into a pan or retort set in a furnace. Into the interior of this retort are fitted rakes and scrapers attached to a shaft in the centre. As the sawdust is fed through the horizontal pipe, which is crowded full to prevent the escape of gas, it falls into the retort and is spread and stirred upon the red hot bottom in a very thin layer by the rakes, which instantly drives off all the volatile gases, and in the meantime the resultant charcoal is carried around to an opening in the bottom where it drops into a suitable cooling chamber. Simultaneous with this operation more sawdust is being fed and spread upon the bottom as before. The gases and vapors are taken off through ascension pipes and conducted through the superheating chamber, where any condensable vapors are converted into incondensable gas. At this point a small amount of hydrocarbon vapor is injected, the whole being thoroughly mixed and converted into a fixed gas of high illuminating power. Oil at the rate of 2½ gallons per 1,000 cubic feet of wood gas was used and a sample of the commercial gas tested by Mr. G. A. Hyde, engineer of the Cleveland Gas Light and Coke Company, and pronounced to have an illuminating power equal to 24 candles. The average illuminating power of the gas produced by his company being about 18 candles. One machine will produce over 117,000 cubic feet of gas and 3,800 lbs. of charcoal from 19,176 lbs. of sawdust in 24 hours. To produce this amount of coal gas would require 45 ordinary coal-gas retorts using 27,000 lbs. of coal. Aside from the cheapness with which gas can be produced as compared with coal-gas, there are many other advantages which will not admit of discussion at this time.

The charcoal can be used in the manufacture of gunpowder and for many other purposes. The feeding and removing charcoal being accomplished automatically, the only labor required is that of firing, which can be accomplished by one man.

IS THERE THE DAWN OF A BETTER DAY FOR TRADE BEFORE US?

There is no better indication of an approaching improvement in the timber trade than an abatement of the scale of importation, and our reports from the provinces almost all notice that there is a palpable lessening in the quantities coming forward, and the Board of trade returns for July are expected in many quarters to show a reduction in comparison with July last year. Our Stockholm correspondent told us last week that "several of the sailing ships usually employed in the carrying of wood goods from the Bothnian Gulf are preparing to lay up the approaching autumn, premiums for insurance giving their owners no hope whatever of making ends meet in the present state of the freight market ;" and from Quebec we learn that vessels are laying up there rather than make another voyage at the freights now ruling. This we consider doubtful at a loading port. Also at Greenock they say that comparatively few vessels will leave the Clyde for the fall voyage, on account of the low rate of freight, and that several of their spring cargoes are already laid up. Though bad for present trade these reports are likely to stimulate it for the future. Less is doing, but more is likely to be done. Last week the import in Hull appeared to be abating. West Hartpool announced "only a light importation" for the week, and our advices from the Tyne stated that the arrivals of the last seven days had been only "small and unimportant." Glasgow also participated in the subsidence of importation for the week preceding, only four cargoes, exclusive of small affairs, being mentioned with timber goods, but the market does not appear to have been much firmer on that account, as 2nd and 3rd Miramichi wide pine planks offered by Messrs. Hunter, Sheriff & Co., on the 30th ult., went no higher than 12½d. per foot cube, equal to £8 12s. per Petersburg standard, and other good sizes weat below £8. If the slackness of importation should continue through the month of August, it could not fail of being a favourable omen for the rest of the season. But these lulls are sometimes delusive, and at Cardiff they seem to anticipate more arrivals than the trade of that district and its ramifications eastward can tell what to do with. Cardiff has been competing with Gloucester for the timber trade of the Midland counties, but now it finds itself at a disadvantage by the lowering of the railway tolls on the east coast to the great manufacturing districts, and thus delivering east country goods cheaper than the west can contend with, and cargoes intended to go that way will now be superfluous in the Bristol Channel ports. Liverpool prices do not improve, and though pitch pine is still a good marketable article there, spruce is struggling against difficulties and can not be imported to leave a margin to the consignee. The best price obtainable at the public sale last week for St. John regulars, say 12 to 30 ft. long, 3x11, was £6 15s., and a cargoe from Shediac only reached an average of £5 12s. per standard, mostly good lengths and sizes, than which we had nothing lower to chronicle in that market since 1879, five years ago. Last week we made some observations on the comparatively good prices which Norway finds fault with, wanting five or six pounds free on board for such goods as compete with American spruce in our markets.—*Timber Trades Journal.*

THE LUMBER TRADE IN ENGLAND.

Messrs. James Smith & Co.'s wood circular, dated Liverpool, Aug. 1, says :—The wood trade continues in the same restricted state, and values show no improvement, in consequence of the large import, and until a falling off in the supply is forthcoming confidence will not return. The demand has been stimulated more or less by the low prices, so that the tables show a large quantity has gone away, but not in proportion to the import, and the present stocks are ample for an ordinary demand. Local building operations are on an improved scale, but the general demand from the manufacturing districts keeps dull. Tonnage is plentiful and rates continue low. Money has seldom been so cheap, which is accounted for by the low level prices at which commodities are ruling, as well as restricted trade. The bank rate still continues at 2 per cent., there being little or no speculation in trade, a condition of affairs that should soon work its own cure.

Colonial Woods.—Yellow pine : The import has been in excess of previous years, the demand has been fairly maintained, but stocks are heavy. The late sales have been of Quebec prime square at 2s. 6d. to 2s. 4d. per foot. and waney at 2s. 4d. to 2s. 6d. per foot. A cargo of very inferior Bay of Islands pine realized at auction an average of 8½d. per foot. Red Pine : No sales. Oak : A large parcel of mixed Quebec oak has been sold at about 2s. 8d. per foot, and prime at about 2s. 10d. per foot. Ash has been sold at 2s. per foot. Elm : No sales. Birch : A parcel of Quebec was offered at auction and withdrawn ; 350 logs, ex-Hilda, from Pictou, realized 17d. to 22½d. per foot for 17 inch deep ; remainder withdrawn. 286 logs, ex-Aspotogon, from St. John, averaged 16½d. per foot ; 63 logs, ex-Flekkefjord, from Bay of Islands, at 16½d. per foot ; 200 logs, ex-Sif, from Miramichi, at 13d. to 14d. per foot ; and by private, a parcel of Dalhousie at 16d. per foot. Birch planks at from 10d. to 13½d. per foot. Walnut : No sales. N. B. and N. S. Spruce Deals : The import, 19,000 standards, is too large, and prices have ruled by private ; St. John at £6 per standard ; Musquash at £5 15s. ; Pugwash at £5 5s. ; St, Margaret's Bay and Sheet Harbour at £5 15s. ; Parrsboro at £5 15s. 3d. ; Shediac at £5 12s. 6d. ; Bay Verte at £5 7s. 6d. By auction, St. John, ex-Aspotogon at £6 ; ex-New City at £6, and Shediac at £5 12s. @ £5 13s. ; Grand Pabos, 2 and 3 inch, at £5 7s. per standard. Boards and scantling at the usual reduction. Quebec pine deals—1st quality, dry floated, 2 inch, at £17 ; 3nd quality, 3 inch, at £15 5s. @ £15 10s. ; 3rd quality at £8 5s. @ £8 12s. 6d. ; the 4th quality at £7 @ £7 5s. per standard. Lower Port pine deals—By auction, 4th quality from Grand Pabos, have been sold at from £6 2s. 6d. @ £8 2s. 6d. per standard, averaging £6 15s. per standard. Red pine deals in the early part of the month were sold at £8, and latterly at £7 10s. per standard. Quebec staves have been sold at £66 @ £70 per standard mille, and W. O. W. I. at £16 10s @ £18 per mille. Pailings and laths—The former realized 75s. for inch thick, and laths at 16s. 6d. per mille.

THE SHUTTING DOWN POLICY.

The question that has been so rife in the great timber centres of the United States lately of shutting down the mills is evidently the outcome of an over supply, and a consequent lowering of everything connected with the lumber trade—logging, hauling, sawing, &c.—besides the price of the wood itself, which is declining to a very serious extent. We do not hear now as we used to of the best grades of Canadian pine being wanted for the American markets, and though as yet the price of choice wood still keeps its tone at the shipping ports, we hardly see how it can be maintained in the teeth of the surplusage of similar wood on the United States side. If first kinds are scarce yet while those of inferior class are so overdone, unless the margin is greatly narrowed, consumers will learn to do without the higher priced goods till these latter eventually find their level in the market.

As yet there has been no actual closing of the mills in the wood sawing districts, but there is plenty of "big" talk going on. which we suppose will lead to something in the way proposed to curtail the production. Though the scheme has not met with the approval of the bulk of the American millowners, especially those who have orders in hand, that some plan of the kind will be adopted we fully expect, as the Americans do not believe in low prices ; any reduction of wages particularly they will not admit without resorting to all kinds of devices to keep them up. It was not with the operatives here, those more especially who fondly imagined that they had become a necessity of the times, such as miners, operatives. &c., and puffed themselves up with the belief that the country could not dispense with their labor for a day without the whole machinery of commerce being thrown out of gear. But these men have long since learnt, by bitter experience, to bow to the inevitable laws of supply and demand, and have found that labor is, after all said and done, only a commodity that has to take its chance of the market, be it cheap or dear, as the case may be, just the same as anything else that is bought and paid for

In this over-production now experienced by the United States we see the connecting link that binds the products of that immense territory with the markets here, and our inability to any longer bear the strain of the immense supplies that have been continuously pouring in for years has at length begun to be felt across the Atlantic. The imports from the States are of this unsatisfactory character, that they must all be paid for in hard cash, there being next to nothing taken in goods by way of exchange to preserve that balance between two great manufacturing empires, without which no healthy trade can long exist. We both make the same articles, and it is only with regard to timber and grain that we really have anything from America that we have not already in abundance, and these latter even we could spare without much hardship.

Coal and iron were at one time the exchange commodities upon which we depended to keep the balance square, but now these are hardly wanted by those countries we used to furnish so abundantly, and America in particular. So that the bulk of the imports from the States having, as stated, to be paid for in bullion, when an over-stock comes, beyond what this market can sustain, prices go down ; and not only does our commerce receive a check, but we now see the American markets are also being overborne. This was not felt in the States for a long time, the vast grain resources of that country coming to the rescue ; but with the markets for the latter also failing the first symptoms of a great collapse of trade are now apparent. How long it will be coming it is impossible even to hazard a conjecture, but many changes will doubtless be made that will stave off the evil day for a considerable time yet to come.—*Timber Trades Journal* (*Eng.*)

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WOOD FLOUR.

An extract from a recent issue of the Chicago *Times* inclines one to the belief that American inventive genius, which has overcome many obstacles in reducing nature's forest growth to meet the requirements of the human race, has at last succeeded in utilizing these products for the very deceptive and discreditable purpose of adulterating the staff of life. The *Times* says the making of wood flour, which is similar to wood pulp, is the chief industry in the Catskill Mountains, New York, and it bids fair to demoralize the forests. It was first manufactured in the Catskills about nine years ago, and now over 20 mills are in full blast. Any soft wood tree—poplar is the favorite—is felled and drawn to the mill. The bark and boughs are removed and the trunk put in a machine, which is nothing but a led-pencil sharpener on a larger scale, with four or more knives instead of one. On starting the machine the pencil-sharpener revolves with great swiftness, and in a few minutes converts the log into a hundred miles of fine, clean shaving. These are ground and bolted exactly as in a flour mill. The product is a fine, yellowish white flour, similar in appearance to a very well ground corn meal. It possesses a slight woody smell, and is almost tasteless. It is put in large bags, and then is dispatched, unmarked, to the buyer. The inclination to believe that this product is used for other purposes than paper making comes principally from reading the last sentence, which says it is dispatched "unmarked" to the buyer. If it is used only for legitimate purposes, why not brand it as every other product is branded. Sugar is adulterated with white clay, coffee also with the same material, and why not suspect that this product of the Catskills is used to mix with genuine flour as an adulteration. The *Times* should dispatch corps of reporters on an investigating tour to the Catskills with instructions to probe this matter to the bottom. Perhaps it may unearth the fact that one or more of the presidential candidates are stockholders in the gigantic scheme. Let no guilty man escape —*Lumberman's Gazette.*

THE NUTMEG TREE.

This is a native of the East Indies, but has been introduced and cultivated in the West Indies and in other warm countries; it forms a medium sized tree and is grown in orchards; a nutmeg plantation and a peach orchard closely resemble each other.

Nutmeg culture was at one time confined to the Banda Islands, and strong efforts were made to monopolize the production, a scheme which failed, it is stated, on account of birds carrying the seeds and dropping them beyond the assigned limits, and thus spreading the tree over the whole islands the Malayan Archipelago, from the Moluccas to New Guinea.

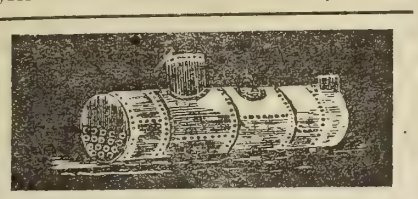
The tree is cultivated to a limited extent in Jamacia, where it succeeds best in a deep, rich, friable soil, which is drained. Undulating ground is preferred in order to assist the running off all superfluous water, as around its roots, although in order to thrive well it requires an atmosphere of the most humid kind. Young plants are readily raised from fresh seeds. The fruit requires nine months of tropical weather to mature.

The correspondent of the New York *Sun* has received a letter from Leonard Henkle, inventor and electrician, of Rochester, saying tha although the action of the New York Legislature in favour of the National Park compels him to abandon Prospect Park and the American side of Niagara for electric lighting purposes, he has nevertheless negotiated for the purchase of land on the Canada side of the river and for power from the great Horseshoe Fall for carrying out his original plan. That plan contemplated the lighting of sixty-five American and Canadian cities, connected by means of underground cables with electric lights generated at Niagara. The plans are all drawn for ten hydraulic engines of 200,000 horse power each, and gigantic machinery. That Henkle himself means business is attested by the fact that he will soon open an office on the Canada side of the river, and endeavour to complete arrangements with capitalists, whom he expects to furnish $22,000,000 for the undertaking.

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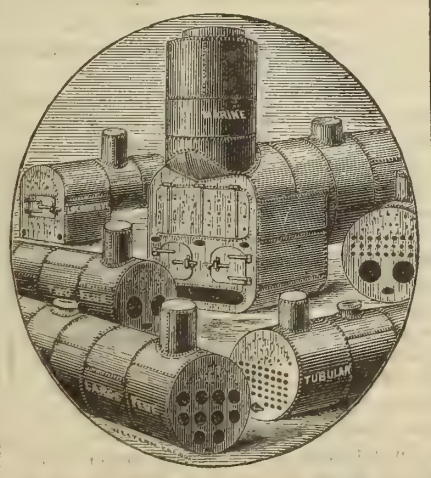
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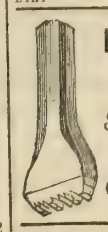
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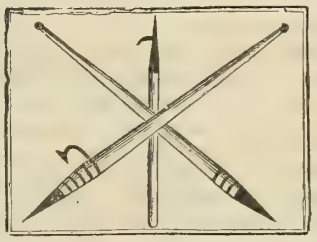


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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., SEPT. 1, 1884.

CONVENTION OF LUMBERMEN.

The Convention of the lumber manufacturers of the northwest was opened at the Grand Pacific Hotel, Chicago, on Aug. 20th. About 60 prominent lumber merchants from all parts of the northwest were present. A. G. Van Shaick, of Chicago, presided over the deliberations. The principal business to be considered is to devise means by which the present depression in the trade may be overcome. It is complained that the supply is much larger than the demand, and it is hoped before the convention adjourns something may be done to remedy this state of affairs.

J. G. Thorpe, of Eau Claire, Wis., being called on, said that lumbering in the Chippewa valley had been only fairly prosperous this season. A large amount of logs are hung up for lack of water. Prices are low and sales dull.

A. A. Carpenter, of Chicago, gave it as his opinion that there was entirely too much lumber in the country. He thought it would be a good thing to stop the mills, but did not think it could be done, on account of lack of concerted action on the part of mill owners; but if some means of relief are not devised it will result in firms having to carry immense stocks at a fearful loss. He thought that the amount of logs taken from the woods should be curtailed. This might not regulate things in one season but it would eventually.

Fred Weirhauser, of Moline, was in favor of shutting down the mills there as soon as possible.

Maj. Camp, of Minneapolis, was satisfied that there is enough manufactured lumber now in the northwest to supply this section with enough to last this and next year. He did not think any agreement between manufacturers not to cut logs would stand. Minneapolis tried faithfully to reduce the cut agreed on last year. Of the logs on hand there this spring 160,000,000 feet have been manufactured. In the river there to-day were 190,000,000 feet of logs which, if they are not manufactured, are liable to be swept away in the ice freshet. The mills above Minneapolis are reducing the cut. At that place 140,000,000 feet of this and last year's cut will have to be carried over. Minneapolis, while manufacturing as little as possible, still has too much on hand, and the firms there, not being rich, cannot afford to carry it, and Major Camp warned the Chicago firms that they would sell it, even at a loss, and would compete with them in the sonthwest.

Thaddeus Dean, of Chicago, rather objected to airing his views, but had to yield to the call for him. He was inclined to indorse the remarks of Maj. Camp. Mr. Dean did not believe much in combinations of men who would bull their goods and make others suffer. The men at this convention virtually owned the pine forests of the country and their actions at this time were momentous. He suggested that instead of spending money in sending delegations to try and influence congress they should stay at home and not interfere with the natural course of legislation. He was not scared at the amount of lumber in Chicago and thought that there was not too much.

J. H. Swan, of Muskegon, thought the mills should run on less time to overcome the surplusage now existing. The mills now run about twelve hours a day; they should run only ten hours. If this was done there would be 10 per cent less produced. He did not think this convention could do anything to meet the exigencies of this year. His mill would close next Saturday after making only 9,000,000 feet, instead of 20,000,000 as usual. They shut down because they could not afford to make a great stock and then sell at a loss. Manufacturers should cut off the amount produced 30 to 40 per cent. The only way to overcome the depression is to shut down.

A. A. Carpenter took exceptions to Mr. Dean's remarks about influencing legislation, and denied the allegation. Continuing, Mr. Carpenter reviewed the state of things on the Menominee river. An agreement had been entered into by the firms there by which the number of logs to be cut was reduced 10 per cent.

Mr. Farnsworth, of Oconto, thought the reduction of 10 per cent at Menominee did not amount to much.

The President explained the matter further, demonstrating that the 10 per cent reduction in the number of logs amounted to a reduction of 20 per cent in lumber.

Mr. Swan, of Muskegon, said that the timber tributary to the eighty-eight mills at Muskegon was in the hands of about ten men. At present there was an immense number of logs there, but he did not think this state of things would occur another year. No mills had been built during the past year at Muskegon, and he was sorry to say only one had burned down, and it was heavily insured.

Maj. Camp, of Minneapolis, said that a number of new mills would be started soon in Minnesota.

Col. Durand, of Stillwater, Minn., was impressed with the gravity of the work before the convention. He thought there was not a single mill owner who would be willing to shut down his mill and throw out of employment from one hundred to one thousand men for all winter. He did not think that an Oconto mill owner could judge of what was best for a mill in Minnesota. The price of crops was low, and this made it impossible to get high prices for lumber. This convention might result in a good social time, but he did not think they could agree on any time when they should shut down. The only anchor to hold on to now was the fact that for two years the country had been prosperous. The lumber interests had passed through two crises, but no one could tell whether it could stand another.

D. C. Cranage, of Bay City, was called on. At his place they were cutting off the timber very rapidly and he did not think the mill owners would consent to stop, as there were local interests there which would not allow it. He would be glad to know of some plan by which the production of lumber in the Saginaw Valley could be stopped, bnt there was none.

A committee of five was appointed, who were given charge of the subjects broubht before the meeting. These are:

1. Has the production of pine lumber in the northwestern states overtaken and exceeded the annual demand?

2. Is the supply of logs and lumber now held by manufacturers in excess of their ability to protect, and how do stocks of lumber at distributing markets compare with other years?

3. During the present financial condition of the country, and considering the current price of agricultural products, can lumbermen expect an increased demand for lumber or higher prices?

4. Would it not be desirable to produce 6,000,000,000 feet of lumber in 1885, in the northwest, as compared to 7,500,000,000 and save the 1,500,000,000 feet of standing timber and the whole cost of marketing it as a profit?

5. In what manner can curtailment be made if deemed advisable?

This committee is: J. G. Thorpe, Eau Claire, Wis.; F. Meyerhauser, of Moline. Ill.; W. J. Young, Clinton, Iowa; Thomas Cranage, of Stillwater, Minn., E. Crepin, of White Lake, Mich.

The present officers of the associacion were then re-elected for the ensuing year. They are: A. G. Van Shaick, president; O. C. Merriman, vice-president; A. A. Bigelow, treasurer; E. S. Hotchkiss, secretary; Directors: E. E. Crepin, White Lake, Mich.; A. T. Lay, Traverse City, Mich.; E. W. Durant, Stillwater, Minn.; O. H. Ingram, Eua Claire, Wis.; R. G. Peters, Manistee, Mich.; W. O. Goodman, Menominee, Mich; J. H. Swan, Muskegon, Mich.; P. M. Musser, Muscantine, Iowa; W. J. Young, Clinton, Iowa; G. S. Shaw, Davenport, Iowa; C. L. Coleman, LaCrosse. Wis.; J. M. Gould, Moline, Ill.; G. W. Roby, Lundington, Mich.; S. W. Farnham, Minneapolis; C. M. White, Montrose, Iowa.—*Chicago Evening News.*

AFTERNOON SESSION.

We summarize from the *Northwestern Lumberman* the business done at the afternoon session.

At 2:40 p. m. the President called the convention to order.

The reports of the Treasurer and the Secretary were read.

Mr Thorp read the report of the committee on business as follows:

Your committee, to whom the questions in the President's address, were referred, reports as follows:

1. Has the production of pine lumber in the Northwestern States overtaken and exceeded the demand?

We answer, Yes.

2. Is the supply of logs and lumber now held by manufacturers in excess of their ability to protect, and how do stocks of lumber at distributing markets compare with former years?

We divide this question, and answer to the part of it that individually we think the manufacturers cannot control or protect prices, but unitedly and with combined effort we believe they can.

Your committee, not having sufficient statistics at hand, cannot answer the second part of this question in a satisfactory manner.

3. Having hope and belief that the financial crisis is passing over, and in view of the now assured large crop of the country and the low price of lumber that corresponds with prices of agricultural products, we have good reason to expect an increased demand for lumber at present or higher prices, provided the manufacturers will hold it steady and without endeavor to crowd it upon the market.

4. We agree with its suggestion that if a reduction of 25 per cent in the quantity of lumber to be manufactured in 1885 can be made, that an amount equal to 1,500,000,000 feet of standing timber and the cost of marketing it would be saved to the owners as a profit.

5. The curtailment can be made by the sawing of less lumber, by shutting down the mills for a month this coming fall, or reducing the cut of the mills next season.

The report was taken up article by article, and after a debate the different sections were adopted.

Mr. Thorpe—It is suggested to me by a member of the committee to amend the report in this way: "Your committee not having sufficient statistics at hand cannot answer the second part of this question satisfactorily." I will ask the unanimous consent of this Convention as chairman of that committee to thus amend it.

The President—If the Convention makes no objection it will be so amended.

It was moved and seconded that the report as amended be adopted, which was agreed to.

Mr. Pierson—I would like to offer this resolution:

Resolved, That there are logs now in sight in the rivers, and with the lumber crop on hand, to supply the market for the balance of this year, and for the next.

Considerable debate followed. Mr. Bassett offered an amendment, which was afterwards withdrawn, and the motion was put and lost.

Mr. Pierson offered the following resolution, which, as amended after discussion, was unanimously adopted:—

Resolved, That, in the judgment of this Convention, in view of the amount of logs and lumber now on hand, we recommend to the manufacturers of lumber that they get out not to exceed 60 per cent of the amount of logs cut in 1883, the coming winter, and that they cease operating their mills this fall as early as possible, and not later than Nov. 1.

Mr. Camp—I move that our semi-annual Convention be held at Eau Claire next spring, at a date to be fixed by the President.

This motion was adopted.

Mr. Thorpe—I was requested by a party, and agree with him, that it may be well to offer a resolution something in this form:

Resolved, That from the facts and statistics gathered and learned at this meeting, and in view of the assured large crop of the Northwest, the probable demand for lumber and the further consideration of the large number of men employed at the several mills who would be thrown out of work, that is not deemed wise nor expedient to close down the mills before Nov. 1 next, leaving it optional with any to close earlier if deemed necessary or best.

In answer to a question the chairman stated the effect of the resolution so be simply recommendatory, leaving each member free to act his own judgment in carrying out its provisions.

The resolution, being seconded by Mr. Norton, was carried.

After passing votes of thanks to the President and Secretary, to the proprietor of the hotel for the use of rooms and to the press of the city, the convention adjourned.

RAFTS ARRIVED.

The Quebec *Chronicle* has the following list of rafts arrived:

Aug. 8.—D. D. Calvin & Co., oak and pine, sundry coves.

Aug. 11.—P. & W. Murray, waney and square white pine, St. Michael's cove.

Collins' Bay Co'y, sundry drams, sundry coves.

D. & J. Maguire, boards, Cap Rouge.

Aug. 12.—John S. Murphy, staves, Indian Cove West.

Aug. 13.—Wm. Mackenzie, red and white pine Hadlow cove.

J. R. Booth (2), red and white pine, Cap Rouge.

Collins Bay Co., spars, New London cove.

D. Moore, white pine, etc., Cap Rouge.

R. Dollaes, waney white pine, St. Michael's cove.

Aug. 14.—John Ross, deals, Woodfield cove.

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The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c, measured and culled to date:—

	1882.	1883.	1884.
Waney White Pine..	1,316,104	1,992,952	1,471,010
White Pine.....	5,328,670	3,813,964	1,887,056
Red Pine.....	894,949	306,309	249,503
Oak.....	754,840	1,354,544	646,792
Elm.....	495,822	248,761	637,898
Ash.....	196,395	196,386	375,961
Basswood	815	2,145	3,902
Butternut.....	2,228	989	1,121
Tamarac.....	4,533	4,916	18,033
Birch & Maple.....	262,417	137,249	185,111
Masts & Bowsprits...	33pcs	—pcs	—pcs
Spars.....	51 pcs	— pcs	41 pcs
Std. Staves.....	278.4.1.20	461.1.0.25	33.1.2.25
W. I. Staves.....	835.0.2.10	466.4.3.6	78.0.0.26
Brl. Staves.....	16.6.2.15	87.1.1.27	0.6.2.13

JAMES PATTON,
Quebec, Aug. 22. Supervisor of Cullers

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AUSTRALIAN TIMBER.

A board appointed to inquire into and experiment on the best kind of timber grown in the Australian colonies, and adapted for the construction of railway vehicles, has sent in its report. Among woods which the commissioners mention as suitable are blackwood, mountain ash, bluegum, and Gippsland mahogany. Under test the blackwood presented results which were superior to any other timber. The mountain ash was second to the blackwood for railway purposes. It should be felled, the commissioners think, during the winter months, when it has attained maturity, and is between four feet and five feet in diameter, and it might remain felled for six months before being broken down into planks for seasoning. Bluegum should be treated in the same manner. Going somewhat beyond its reference, the board deals with the question of timber licenses, and recommends that getters be compelled to pay for the timber felled, and to confine their operations to a given area, or otherwise that selected lots of trees be sold by tender. It is also strongly recommended that a forest board should be called into existence.

A COMPETITOR.

The Thunder Bay *Sentinel* says :—We are glad to notice that the Winnipeg and other papers have taken up the question proposed by us in connection with the establishment of Port Arthur as the great lumber handling centre for the western market in opposition to St. Paul. As is well known the material furnished from the pineries of Northern Wisconsin and Southern Minnesota cannot be beaten in point of quality in the States, and as its price at Ashland is lower than at St. Paul and the cost of shipping it to Winnipeg and the Canadian Northwest considerably lower than by the St. P. M. & M. line, the advantages we have over St. Paul, the present distributing point, must be apparent. Besides, our own railway would get a 428 mile haul instead of the run of 68 miles from Emerson to Winnipeg as now. We hope shippers are taking note of these facts and that the question is being laid before the C.P.R. authorities.

AN AWFUL FATE.

OTTAWA, Aug. 26.—A terrible story comes from Shrewsbury, Province of Quebec, which will long be remembered in that village. A short distance from Shrewsbury there resides a farmer named Leblance, a French Canadian. On leaving home a few mornings ago to work in the woods, he told his wife to send their daughter, who was 12 years old, with his dinner at noon. After waiting until 3 o'clock in the afternoon he concluded to go home, as no dinner had arrived. He shouldered his gun and started, but before he had gone far he noticed an immense bear apparently eating something. He watched it for a moment and fired, missing his mark. While reloading he could see tbat it was a human being the bear was devouring. He then rushed up to within easy gunshot, discharging his rifle into the bear, which rolled over, to reveal the body of his little daughter, disfigured and almost beyond recognition. The flesh had been torn off her legs and face, while she still held in her little hand the tin can containing her fathers dinner.

The Crushing Capacity of Brick.

Rather a soft brick will crush under a weight of about thirty or forty tons per square foot, while a first-rate machine pressed brick will require from 300 to 400 tons per square foot ; this last is about the crushing limit of the best sandstone, or two-thirds as much as the best granites or roofing slates. But masses of brickwork will crush under much smaller loads than single bricks, thus, small doubled masses only nine inches each side, laid in cement, crushed under twenty-seven to forty tons per square foot; others, with piers nine inches square and two feet four inches high, in cement, only two days after being built, required forty-four to sixty-two tons per square foot to crush them, cracking and splitting usually under about one half the crushing loads.—*Industrial World.*

The Congo Country.

LISBON, AUG. 29.—The King of the Congo district, on June 16th, made a formal protest against the treaties entered into by the Palla Bolla Princes with the African International Association. They had, says he, no right to cede territory to the Assocation.

DULUTH ON FIRE.

DULUTH, Minn., Aug. 23.—About 6:30 this evening the large saw mill of Little & Peck caught fire and was totally destroyed. Then the large lumber yards caught and were consumed, and at this hour (10:30 p. m.) the fire is in the mill of G. W. Peck & Son, which will be destroyed. Other property is in danger, and it looks now as though the fire could not be stopped till it has swept away the Barner Lumber Company's mill, and a large quantity of lumber in addition to what is consumed. The origin is not known at this hour. The loss is already estimated at over $100,000.

Keeping Wood in Moist Ground.

A Brooklyn, N. Y., carpenter writes us that, in 1864, he laid down some old painted half-inch door panels as a flooring for a coal bin at the rear of his yard, and that, on taking them up seven years afterward, they were just as sound as if they had been but recently cut from a thrifty living tree, although so pliable with moisture that he could have bent one of them around a six inch stove pipe. Our correspondent suggests that the painting of railroad ties, or coating them with white lead and oil, would be very efficacious for their preservation.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain and cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup for children teething. Its value is incalculable It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentery and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system, Mrs. Winslow's Soothing Syrup for children teething is pleasant to the taste, and is the perscription of one of the oldest and best female nurses and physicians in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainity, write for particulars to H. HALLETT & Co., Portland, Maine. 6md145-1yw

MILITIA.

SEALED TENDERS, marked on the left hand corner of envelope "Tenders for Militia Clothing and General Store Supplies," and addressed to the Honorable the Minister of Militia and Defence, will be received up till noon of Monday, 11th August, 1884.

Printed forms of tenders, containing full particulars, may be obtained from the Department at Ottawa and at the following Militia Stores, where also sealed patterns of all articles may be seen, viz :—The offices of the Superintendent of Stores at London, Toronto, Kingston, Montreal, Quebec, and St. John, N. B.

Tenders not in relation with sealed patterns of the Department or accompanied by special patterns will not be received.

No tender will be received unless made on printed forms furnished by the Department.

The material of all articles will require to be of Canadian manufacture and Canadian workmanship.

Each tender must be accompanied by an accepted Canadian bank cheque, for an amount equal to ten per cent. of the total value of the articles tendered for, which will be forfeited if the party making the tender declines to sign the contract when called upon to do so, or if he fails to complete the service contracted for. If the tender be not accepted the cheque will be returned.

The Department will not be bound to accept the lowest or any tender.

C. EUG. PANET,

Deputy of the Minister of Militia and Defence

Ottawa 4th July, 1884.

THE CELEBRATED COOK'S FRIEND BAKING POWDER.

Is the Best and Most Economical article in use for raising all kinds of Biscuit, Rolls, Pancakes, Johnny Cakes, &c. It is made from the BEST MATERIALS MONEY CAN BUY, and is perfectly pure and wholesome. Bread ready for the table can be prepared by its means in TWENTY MINUTES after wetting the flour. ☞Next to salt it is the most useful adjunct to camp supplies.

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IS THE ONLY GENUINE, BE SURE YOU PURCHASE NO OTHER. 1yr15

FORESTAL EXPERIMENT STATIONS.

The following is a paper by Adolph Leue, Secretary of the Ohio State Forestry Association, read by him at the Columbus meeting of the Ohio State Forestry Association :—

Through the unwearied labor of a few men, scientists as well as political economists, and through the influence of the press, it has been shown and is now fully understood that the prosperity of a country is to a very great extent dependent upon the proper condition and distribution of its forests. In view of this significant fact, it is indeed very strange that we, as a people, devote so little attention to forestry—that many of our State Governments have even not recognized forestry as a subject worthy of any consideration, and that but in a few States laws have been enacted to promote this great interest. The cause of such profound indifference on the part of our fellow citizens lies in their want of knowledge of the true condition of our forests, and of the constantly increasing demand upon forest products, and the consequent rapid decrease of the forest area. In support of this assertion, I need not refer you to the enormous destruction of the forests in Wisconsin and Michigan, nor need I point to the South, where the saw mills are now making great havoc among the forests, and to the deplorable condition in which the denuded regions are left. Our own beautiful State of Ohio, once among the richest and excellent timber forests, has for years been unable to supply its own wants. Some of the most valuable timber trees have almost entirely disappeared in some counties, and are rapidly dying in others on account of the harsh treatment they receive. Since 1853 there has been a constant decrease in the forest area of almost every county of Ohio, and this decrease has been more rapid during the years between 1870 and 1881 than during the years between 1853 and 1870. A glance at the remains of our woodlands reveals, that the most valuable and even the most ordinary kind of timber has been gathered from them. When the rest shall have been cut, or shall have perished by age, or maltreatment, the forests will disappear ; for, owing to the pernicious practice of utilizing woodlands for pastures, the rejuvenescence of forests was made impossible. The ruin of the prosperity of our fair State is unavoidable, unless effective measures be taken to supply the future demands upon timber and other forest products, by carefully husbanding of what we have and by planting new forests. Here our difficulties commence. We may indeed sooner expect a spendthrift to instantly cease all rivalry and become a careful and economic manager of a nearly squandered fortune, and by personal effort amass another, than to expect a people, whose relation to forests has, we may say, by necessity been hostile for several generations to most economically husband an existing forest, and to plant, cultivate, and manage a new plantation. The late Dr. John A. Warder, whom future generations will call the father of American forestry, was right, when he emphatically declared that we neither know *where*, *what* nor *how* to plant. Now, there is no other alternative ; we must learn this, and the sooner we commence, the better for us, for our fellowmen, for our children, and for our country.

We may learn this in two different ways, namely, deductively and inductively, by the more rapid and more reliable way of experimenting.

By way of illustrating which of the two methods is preferable, I beg leave to briefly call your attention to the history of the development of agriculture. From the earliest time up to the beginning of the nineteenth century it was a mere empirical art, resting, as it were, solely upon the traditional maxims of experience, without any signs of progress. But when, in the first part of the present century, Liebig and others subjected those ancient maxims of experience to a series of scientific investigations, a new era began to dawn upon the most important occupation of mankind. Since then, such investigations have been carried on in schools of agriculture, which have been established in all civilized countries, and have reached the highest point of perfection in the agricultural experiment stations. The result is most gratifying, for by means of these investigations and systematic experiments agriculture has been elevated to the dignity of an exact science.

This hasty glance at the history of the development of agriculture plainly indicates the course to be pursued in the attempt to raise forestry, the younger sister of agriculture, to the same dignity. A very successful beginning has been made in Germany, where the idea of establishing forestal experiment stations originated. One or more chief stations, with an appropriate number of subordinate stations, have been established in nearly every State of Germany. The great importance which the governments of the States in which they are established attach to those stations may be seen from the fact that in Germany about $30,000 are expended annually for the maintenance of the same ; and their number is steadily increasing. Austria, Switzerland, Italy, Spain, and even Russia, are following the example of Germany.

If those nations whose attainments in forestry are truly great, deem it advisable, and even necessary, to submit the maxims of long experience to a series of scientific investigations and systematic experiments, how much more should we, on this side of the Atlantic, ignorant as we are of almost everything pertaining to a reasonable system of forestry, make an effort to base that system, for which we are longing and which we greatly need, upon scientific principles.

The need of forestal experiment stations in the United States and in Canada has long been felt, and the desire for the speedy establishment of the same has been expressed in various ways and at different times. But this has been to no effect, because of the want of a suitable plan of organizing the same. Our climate, the nature of our forest trees, the want of State forests and of trained foresters, render the adoption of the German plan inexpedient, and require a plan that shall be adapted to our peculiar circumstances, and at the same time meet the demands which can reasonably be made upon such an institution.

Convinced of the necessity of speedy action in this matter, I laid before the American Forestry Congress, at its meeting held in St. Paul, Minn., August, 1883, the following plan of organization with special reference to Ohio :

I.

The object of the forestal experement station in Ohio is the development of a rational system of forestry adapted to the wants of Ohio.

II.

The station shall consist of a *centre* and an unlimited number of *primary* and *secondary* stations.

III.

The centre of this station shall be the Agricultural College at Columbus, and shall be under the management of a director, whose sole duty shall be—

1. To preside over all the meetings of the committee on forestal experiment stations (see § VI)

2. To ascertain the condition of the forests of Ohio, and the wants of forestry in this State, and to institute the necessary experiments and investigations.

3. To prepare plans of experimentation and to devise suitable formulæ for recording the work performed at the primary stations (see § VI.)

4. To attend to all the correspondence connected with the station.

5. To represent the Forestal Assembly of the State of Ohio at home and abroad.

6. To report to the General Assembly of the State of Ohio,, on or before the second Tuesday of January of each year, the work performed at the station, and to render an account of the money expended in experiment and investigation, and of all other expenditures of the station.

7. To submit an estimate of the probable expenses of the station for the ensuing year.

IV.

The *primary* stations shall consist of at least three acres of ground, each, which shall be devoted to experimenting ; and the experiments performed on the same shall be after a definite plan agreed upon by the Committee on Forestal Experiment Stations (see § V1.)

V.

The secondary stations shall be devoted to general investigations, such as analysis of soil, testing the vitality of seeds of forest trees, determining the comparative value of forest products and testing the adaptability of the various kinds of woods for mechanical and technical purposes.

VI.

The directors of the forestal experiment station and the principles of primary and secondary stations shall constitute the Committee on Forestal Experiment Stations.

VII.

Each primary and each secondary station that may be adapted for making forestal meterological observations, shall, at the desire of the principal of such station, be provided with the instrumenss necessary for such purpose.

The Forestry Congress not only endorsed this plan, but, by a resolution, appointed a committee to recommend the adoption of the same to the several States of the Union and to the Provinces of the Dominion of Canada. [H. W. Morgan, of Amherstburg, Ont., is one of the Committee.]

To effect an organization, based upon the above plan, the first step to be taken is the appointment of a director, who, having ascertained the needs of forestry in Ohio, should proceed at once to organize both primary and secondary stations. In this, however, proper care should be taken in locating the primary stations as well as in selecting the parties for conducting the experiments and for making the special investigations ; ignorant and unreliable persons should be rigidly excluded.

As the State of Ohio still owns certain tracts of land adapted for forest culture, it would not only be proper, but even advisable, to utilize the same for experiment stations and model forest plantations. But the immediate future of our forests, depends, and will depend, chiefly upon the farmers, who almost exclusively constitute the owners of property that is available for forest culture. They are, therefore, the first to reap the benefit of a rational system of forestry, are thus directly interested in forestal experiments, and will, it may be confidently expected, assist in making the enterprise a success. But there is another and more direct inducement for farmers to participate in this great noble work. The experimentation is, to him who undertakes it, an excellent school of forestry, which not only charges no tuition, but rewards him with at least the necleus of a forest, which will greatly enhance the value of his farm.

The readiness with which several very intelligent farmers of this Commonwealth have consented to perform on their own lands, and at their own expense, such experiments as the committee on forestal experiment stations may suggest, guarantees the success of the enterprise.

It is, however, not only the farmer who will be benefited by such forestal experiments ; almost all of those engaged in the mechanic arts are more or less interested ; while, for example, the builders, the cabinet-makers, the coopers, the carriage and wagon-makers, the manufacturers of matches, spools, bungs, lead-pencils, tool handles, and other like articles, depend entirely upon the forest for the material used in their respective arts, there is scarcely any other industry which does not, in one form or another, draw upon the products of the forest. The great railroad and telegraph companies, which consume vast quantities of wood in construction of their roads and lines, are greatly interested in this question. An abundance of forests, and a cheap method of raising them, will have a material effect upon the prices of the raw forest products, upon which the existence of such industries depends.

But the object of forestal experiment stations is not limited to forest culture. To test the relative value of forest implements, to devise new methods of obtaining forest products, to find new uses for the same, and to discover new forest products for certain purposes, are very significant features of the secondary stations. While the primary stations aim to furnish the means by which to increase the wealth of the owners of forests, the secondary stations will call into existence new industries and promote those now in existence. It will therefore be to their own advantage, if these several industries foster this great enterprise by making direct researches, or by giving such information as will from time to time be asked of them, or by rendering pecuniary aid which will be needed for such investigation.

The scientific department of the station is of exceedingly great importance, and its development should have the immediate and most scrupulous attention of the director. Although this department should ever be considered a distinct feature of the forestal experiment station, it should never be isolated, but be conjoined with every experiment and investigation. The scientists and the practical forester must go hand in hand, else the object of the institution will not be attained.

Unfortunately, the various branches of science which find application in forestry, have not been studied very extensively in this peculiar relation in this country ; the terms Forest Botany, Forest Zoology, Forest Geodesy, etc., are almost unknown ; whence only such specialists as are perfectly reliable and capable of making original investigations should be intrusted with the scientific work of a secondary station.

An experiment station organized according to this plan will, I believe, meet all the demands that can be made upon such an institution. It places the practical work, where it belongs, in the hands of those who are best qualified for it, and who are the recipients of the benefits resulting from the same. The State, by appointing a director, serves merely as an instrument to effect the organization, to collect the results, and to make them known through appropriate reports, which will become the solid foundation of a *system of forestry adapted to the wants and conditions of Ohio.*

It may be interesting to add that the American Forestry Congress passed at its session in Cincinnati, in 1882, the following resolution :—

Resolved, That it is the unanimous sentiment of this Forestry Congress now assembled at Cincinnati, Ohio, that the Congress of the United States should at a very early day take such proper steps and enact such further laws as will increase the forestry interest in this country, and to that end establish at the several agricultural institutions, both State and National, experimental forestry stations, to be constructed on the same general principles as those in Germany.

The above resolution was introduced by Senator Horace Wilson, of Columbus, upon hearing my paper on *Forestal Experiment Stations*, read before the Congress on the day previous.

On the 10th of February, 1883, the late Dr. John A. Warder offered, at a meeting of the Ohio State Forestry Association, the following resolutions, which were adapted unanimously :—

Resolved, That we beg of all the agricultural colleges established under the land grant of Congress, that they shall lose no time in planting State aboreta and establishing forest experiment stations, where all species adapted to the soil and climate shall be tested, and whence surplus seeds and plants may be distributed. Annual reports of these establishments to be made to the Governors or State boards of agriculture.

Resolved, That Congress be asked to establish one or more Experimental Forest Stations upon the public Domain, where the propagation and testing of useful trees shall be the leading object, with the collection of seeds and plants to be distributed by or under the direction of the United States Agricultural Department, to which bureau these stations shall make annual reports.

In April, 1883, I advocated before the O. S. F. A., in a paper, "Our next Problem," the speedy establishment of Forest Experiment Stations, and at a subsequent meeting submitted a plan of organizing such stations.

The St. Paul *Daily Globe*, of August 9, 1883, had the following in reference to the plan mentioned in Section VII., submitted by the writer :—

"Prof. N. H. Egleston, of Washington, and Mr. Memier, of Illinois, endorsed the paper very heartily, as a simple, practical plan that, it seemed to them, would recommend itself to general favor.

"Judge Higley, of Cincinnati, briefly ex

plained how the plan came to be adopted by the Ohio Association, detailing the efforts of the society to get State aid for forest culture, under the head of a State Forester, from the failure of which came the plan outlined in this paper, and which, he said, was meeting with much better success than was anticipated.

"Dr. Hough, of Lowville, thought such a plan should have a strong claim upon the leading educational institutions of a State, which could most profitably conduct the experiments mapped out.

"Dr. G. B. Loring had no doubt that the stations provided for would prove a success in the great States of Ohio, but he thought these stations should be as closely allied with our colleges as possible. Time was, when the mention of a college in connection with agriculture or forestry met with ridicule. But that time has passed, and as a rule, legislators, backed by public sentiment, stand ready to grant all reasonable aid to such institutions, and he argued that the true road to final success in agricultural and forestal developments was these institutions; and as necessary means, he urged that the best of talent and highest cultivation be secured to conduct them, thus placing them upon that elevated plane which their importance demanded, giving them their proper position in the scientific teachings of the day."

Prof. N. H. Egleston, now Chief of the Forestry Division at Washington, wrote to me under June 29, 1883:—

"I am very glad to know that you have moved in this matter of establishing in Ohio forestal experiment stations, and so far as I understand your plan, it seems to me a good one. I have long thought the establishmcnt of such stations one of the most important and first things to be done. I hope that you will be able to carry out your plan. The example of such a great central State will encourage others to follow the same direction."

Robt. Douglass, the well known Arboriculturist, of Waukegan, Ill., writes me under September 11, 1883, in reference to the experiments proposed:—

"Experiments of this sort will teach us more, even if planted on a small scale, than the past 20 years have taught us in all the theorizing at horticultural and forestry conventions."

(4.) That committee consists of Prof. N. H. Egleston, of Washington, D. C.; H. W. Morgan, of Amherstburg, Ont., with Adolph Leue, of Cincinnati, as Chairman. Owing to the great distance at which the members of that committee reside, no meeting was effected, and no action has been taken.

AN ELECTRIC MOTOR.

An electric motor was tried on a Cleveland street railroad, last Saturday. The experiment was so successful that the company expect to change their entire system, comprising over 70 miles into electric roads. The system used was a combination of the Brush and Knight and Bentley systems, and the current was carried on underground conductors laid in conduits, like those of cable roads. The cars were started and stopped and reversed with the greatest ease. Any number of cars up to fifteen can be run at one time on a single circuit and from one machine, which is a result not attained by any of the European systems now in operation. The success of the new road has made a great sensation in both street railroad and electrical circles, and is expected to greatly extend the field of electric development, as well as enhance the value of street railroad properties.

Lumber Prospects.

Notwithstanding the numerous failures of the past few months which were apt to affect the general line of trade, there is a firm feeling that the crisis has been tided over and the legitimate channels of business left undisturbed, and that after the accustomed dullness through the summer months business will assume a perfectly satisfactory condition. The approaching presidential election may possibly have a tendency to subdue ventures in business till the question of election is settled, though the hopeful remarks we hear on all hands do not warrant a statement of that nature.—*Lumber Trades Journal*

Chips.

JOHN DE GRAW & SONS, lumber dealers, of St. Paul, made an assignmeut on Friday. Lumbermen for some time past have exhibited great freedom from financial difficulties, and it is hoped the trouble with this firm will be only temporary.

WHEN property and labor and building material is low is the time for the capitalist to invest his surplus funds. By so doing, he will assist in restoring confidence, furnishing employment to wage workers, set the wheels of commerce again in motion, and thereby enhance values, and by so doing make positively certain quick and remunerative returns for his investment.

ALTHOUGH there may be no boom in the lumber market, and possibly there is a wide difference in the views of buyers and sellers generally as to prices, yet there is undoubtedly a large quantity of lumber changing hand. We know of one commission dealer who has sold 6,000,000 feet in the last three weeks, 2,000,000 of which exchanged owners at $9, $18 and $38. This does not look as though the prices on good lumber were suffering any very material decline.—*Lumberman's Gazette.*

PINE trees, it appears, are no more safe from the ravages of the pest known as the "borer" or "sawyer" than is any other timber. Word comes from North Carolina that large numbers of excellent pine trees are being destroyed by these pests. Of course, free traders will still insist that the $2 tax should be removed from Canadian lumber in order to "save" this timber. Of all the nonsensical arguments ever advanced in support of any theory, this one of removing the tax from Canadian lumber in order to "save" American timber is the worst. More timber is destroyed annually by forest fires and borers than the importation of Canadian lumber amounts to, large as it is.—*Lumberman's Gazette.*

"THE keenness of the competition at the present time, says the *Timber Trades Journal*, "has the effect of bringing the shipper and the consumer closer together each succeeding season, the small margin obtainable not allowing of the usual commission to the middle man, who eventually, if things go on as they have been going, will be dispensed with altogether." The conditions existing in England and the United States, in the lumber trade, according to the above, are not altogether dissimilar. The manufacturer and consumer are being drawn together in this country also, mainly from the same cause as noted above,—exceedingly close competition. Rail shipments at the great producing centres are rapidly on the increase, and no better evidence of this "drawing together" can be found than in this fact.—*Lumberman's Gazette.*

MUSKEGON lumbermen don't appear to take any stock in the coming Chicago convention of lumbermen to inaugurate the shutting down movement. The *News* of that city says that it is not probable that Muskegon will send any delegation to the lumberman's convention at Chicago, Aug. 20th. They don't take much stock in these Chicago conventions, as they are too much of the turkey and buzzard kind. A concert of action in shutting down the mills is impracticable, and should the convention decide upon something, most of the mill men will go home and do as they please. As a Muskegon mill man told the *News* the other day, "the fellows who are at the bottom of these conventions never intend to stick if they can only induce others to. They want to get some advantage on the other fellows." The above extract embraces a large part of the meat in the cocoanut which will defeat the proposed movement for an early shut-down of the mills of the northwest—a lack of faith in the honesty of the movement. But aside from this, we have no faith that the movement can be made general. The conflicting interests seem to be so numerously presented already that we can see no reason to expect anything else than failure. Other business, however, may be transacted which will be of importance to the trade, and every lumber manufacturing centre should be well represented.—*Lumberman's Gazette.*

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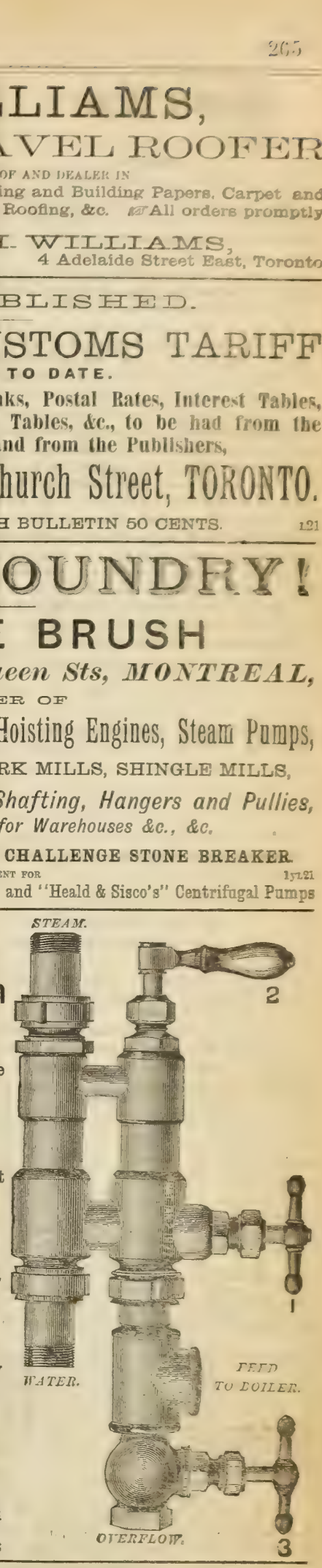
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JOHN CARLING,
Postmaster General.

Post Office Department, Ottawa, 31st July, 1884.

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Market Reports.

TORONTO.

From Our Own Correspondent

AUG. 25.—Since my last letter to the LUMBERMAN trade has somewhat revived, and although dealers have not all they could do, yet they are far from being idle. When we take into account the fact that Muskoka alone yields yearly 100,000,000 feet of common lumber, most of which finds its way to this city, and but little of the coarser grades finds a foreign market, it is surprising that so little lumber is now held in stock as compared with the total production. On visiting some of the mills north I found that some had to cease producing until a market for their stock on hand had been found, and before I returned from that district some sales had been effected so that the mills could go on cutting as usual. The prices obtained, however, were low as compared with former sales, but the want of room to pile the balance of the season's cut proved an important factor in favor of the purchaser, and, strange to say, in spite of all the surplus stock on hand it is difficult to obtain bills of dimension stuff in any reasonable time. Extremely few of the mill men can be brought to see the importance of time to a contractor, who may have a contract to perform in a specified and often very limited period. A good school for a man intending to become a producer of bill stuff to be used on contracts, would be to serve for a time as contractor. He would then get an idea of the value of time to such men as would prove useful to him and of immense benefit to those who might purchase from him in the future. Then the time consumed by the railroad companies in bringing lumber to market is another serious trouble both to dealers and consumers alike. I will venture to assert without fear of truthful contradiction that many consignments of grain are made from Chicago which reach Liverpool in less time than some shipments of lumber reach Toronto from Midland, but as the G. T. R. has now reached that point of huge monopoly which brooks no interference it is useless to complain, grin and hear it is the only comfort left.

Over our docks trade is quiet, only a few cargoes left since my last letter, and no inducements to increase shipments.

There is no appreciable alterations in prices, merely slight fluctuations in quoting on desirable bills or undesirable as the case may be.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
Scantling and joist, up to 16 ft	13 50
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 00
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	20 00
" " " 32 ft	21 00
" " " 34 ft	22 50@22 50
" " " 36 ft	24 00
" " " 38 ft	27 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	24 00
" boards "	20 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 00
Three uppers, Am. inspection	35 00@40 00

B. M.

1¼-inch flooring, dressed	30 00
1¼ " " rough	16 00
1½ " " dressed	25 00
1½ " " undressed	15 00@15 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	2 90
Sawn Lath	2 75

ST. JOHN.

The St. John *Globe* of last week says: The stock on hand 1st Aug., of St. John pine, was 22,000 feet, against 8,000 in 1883 and 3,000 in 1882. Of N. B. and N. S. spruce deals the stock on hand at the first of the month was 21,578 standards, in the same period in 1883, 10,869 standards, and in 1882, 9,682. In N. B. and N. S. pine deals, the present stock 1,260 standards. The sales during the past month have been as follows:—Birch—By auction, St. John, 14½ inches average, at 6½d. per foot; Dalhousie, at 16½d. per foot; Miramichi, at from 13d. to 14d. per foot. Spruce deals.—St. John, at from £6 to £6 1s. 3d. per standard. Scantling.—At from £5 5s. to £5 10s. per standard.

WINNIPEG.

The Winnipeg *Commercial*, of Aug. 19, says: The activity noted in this line in our last issue still continues to improve. Building in the city and country is much better this season than dealers had anticipated. We are still in the dark regarding quotations, as dealers do not seem inclined to name prices only to actual purchasers.

MONTREAL.

From Our Own Correspondent.

AUG. 23.—We cannot report any improvement or much change in this lumber market. Business is quite hopeless, and buyers do not seem inclined to give even present prices, some of which, it will be observed, are lower than last quoted. Dealers are still disinclined to add to their stocks, but some are sanguine of rather better times as soon as the exhibition is over. We quote as follows:

Pine, 1st quality, ℔ M	$35 00@40 00
P ne, 2nd " ℔ M	22 00@24 00
Pine, shipping culls, ℔ M	14 00@16 00
Pine, 4th quality deals, ℔ M	10 00@12 00
Pine, mill culls, ℔ M	7 00@ 9 00
Spruce, ℔ M	10 00@13 00
Hemlock, ℔ M	9 00@10 00
Ash, run of log culls out, ℔ M	15 00@18 00
Bass, " " ℔ M	15 00@20 00
Oak, ℔ M	40 00@50 00
Walnut ℔ M	60 00 100 00
Cherry, ℔ M	60 00@80 00
Butternut, ℔ M	25 00@35 00
Birch, ℔ M	20 00@25 00
Hard Maple, ℔ M	25 00@30 00
Lath, ℔ M	1 75@ 2 00
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 60@ 0 00

SHIPPING.

As will be seen from the following exports of lumber recorded at the Custom House shipments to South America have been pretty active for the past two weeks. The demand for tonnage is rather slack for that destination and we only hear of vessels being taken for the N. K., viz., brig Hannah, for the Bristol channel at 52s. 6d; SS. Rosshire, from Three Rivers to Liverpool, at 50s. and SS. Glen Isla, to Liverpool, at 50s. Shipments have been as follows: Bk. Lea, for Buenos Ayres, 87,407 per lumber; Bk. Stella Maria, for Buenos Ayres, 470,748 feet lumber; SS. Deale, for Glasgow, 1,967 pcs. deals; SS. Somerset, for Bristol, 6,815 pcs. boards; SS. Craigton, for Liverpool, 8,441 pcs. deals, 1,842 ends and 9,874 boards; bk. Premier McKenzie, 338,816 ft. white pine boards, Bk. Jas. Kitchen, 431,397 ft. white pine boards, both for Buenos Ayres; Ship Comet, for London, 14,730 pcs. deals and 24,811 battons; SS. Vancouver, for Liverpool, 1,290 pcs. deals; SS. Scotland, for London, 4,140 pcs. deals and 5,188 ditto; SS. Texas, for Liverpool, 7,530 pcs. deals, 828 pcs. white oak and 144 pcs. ash; Bk. Aurora, for Monte Video, 518,737 ft. white pine lumber; Bk. Wawalench, for Buenos Ayres, 23,754 white pine boards, 43,463 ditto pickets and 4,731 pcs. white pine lumber; Bk. Cupid, for Buenos Ayres, 528,584 ft. white pine boards; SS. Brooklyn, for Liverpool, 6,454 boards, 672 pcs. 2 inch deals, 4,095 3 inch deals, 1,757 pcs. deals and 565 bals. elm lumber; Bk. Salisbury, for Buenos Ayres, 22,801 pcs. white pine boards and 16,223 pickets.

LIVERPOOL MARKETS.

Our mail advices report that the imports for last month were very heavy and that the consumption was also of an unusually large character so that the stocks held are not much in excess of those held a month previous. Private sales of spruce deals from St. John, N. B., were at £6 per standard ex quay. Auction sales of the same averaged from £6 1s. 6d. to £6 2s. 6d. per standard. Birch from St. John, N. B., averaged at auction 16d. per foot for 14 inches, 16½d. for 15 inches.

QUEBEC.

The Quebec *Chronicle*, of Aug. 22, says:—As far as we can learn there has been very little done, and the demand for square timber has been *nil*. Waney appears to be in better demand, and some St. Lawrence wood has been placed at 33c. for about 19 inch. Hardwoods—we hear of nothing doing.

CHICAGO.

The *Northwestern Lumberman* of Aug. 23rd says:—The arrivals at the docks have been but moderate during the week. From 6 to 10 cargoes have been offered each day, and have been sold under the influence of a fair demand. The wind has been contrary all the week, and for three days blew a gale from the southwest, so that it was difficult for any craft but steambarges to get into port. Now that the wind has changed it may be expected that the Monday fleet will be a big one.

The demand for piece stuff is declared to be good by the commission men. The effect of limited arrivals and an improved shipping demand at the yards has been to make the inquiry for piece stuff more urgent and harden prices. Sales have, as a consequence, been effected with less trouble than two or three weeks ago. The commission men say that it is not as hard work to dispose of desirable stock as it was a short time since. While they do not quote higher prices, they say that there is more firmness and quicker sales at outside prices. There is less insisting on concessions; more lumber sells at $8.50 than last week, and there is less effort on the part of buyers to force the price below $8.25. It is probable that the critical period has passed as regards dimension lumber, and that hereafter holders will have but little difficulty in realizing the present range of prices. This must be said, however, that much of the stuff to come forward hereafter is likely to be partly or wholly dry, and that yard dealers can afford to pay more for it than for the green lumber that came directly from the saws in June.

The larger portion of late arrivals has been No. 2 inch lumber, which continues to sell at $9 to $11. This week three cargoes of Lake Huron and several from Lake Superior have put in an appearance. This lumber has sold straight in most instances and on private terms, The Lake Superior stock was some of Tom Nester's Baraga output, sawed thick, and running largely to better than common.

Shingles have been coming rather more liberally during the past week or ten days. Prices maintain our quoted range. The market continues to absorb all that are offered, though it would require but little more to cause an overload.

Quotations are as follows:—

Piece stuff, green	$ 825@ 9 50
Long timber, green	10 00@10 50
Coarse common	9 00@ 9 50
Boards and strips No. 2 green	9 50@11 00
Boards and strips Medium, green	9 50@13 00
Boards No. 1, green	15 00@18 00
High grade	18 00@24 00
Shingles, standard	1 52½@1 75
Shingles, Choice	1 75@ 1 90
Shingles, extra	1 90@ 2 20
Shingles, clear	2 80
Shingles, cedar	1 50@ 2 00
Lath	1 25@ 1 40

LAKE FREIGHTS.

Grand Haven	$ 1 00
Muskegon	1 00
Whitehall	1 37½
Ludington	1 50
Manistee	1 62½
Menominee	1 62½
Oconto	1 62½
Cheboygan	1 50
Alpena	1 75
Bay City	2 00
Tawas	0 00
Frankfort	1 62½

AT THE YARDS.

At last the report can be given, without mistake, that shipments from the yards are on the increase. Symptoms of revival have been manifest for two or three weeks past. Last week it was noticed that individual yards were sending out longer daily trains than a short time previous. Now the new life is visible in nearly every yard, and all over the district. The fall trade seems to have actually begun. Judging from appearances, there is as much lumber now being shipped as there usually is at this time in August. One yard reports 60 cars behind on orders, and it should be noticed that cars are now readily obtained, which is the opposite of experience during past years. And it should be noticed also that it is only from a week to a fortnight since the revival bagan, so that the existing busy condition of the yards has come all at once, as it were. Should the brisk movement continue uninterruptedly for two or three weeks there would be considerable getting behind with orders in spite of every effort to clear them off.

In shingles the trade of this city has a great advantage this year. A large stock has been put in at low figures, so that Chicago can now beat the world selling shingles. They are going all over the Northwest, considerable quantities finding their way even to northern Dakota. The yards that bought freely of shingles during the season of heavy arrivals and cheapness will be apt to make a fair profit of their investment.

The rising demand for lumber at the yards should have a tendency to so steady prices and mitigate the vicious habit of cutting when there is no particular need of it.

Stocks in the yards are now in good condition. All sorts are in supply somewhere in the district. It is alleged that B inch selects are always procurable between yards. Anything that is wanted in the line of lumber can be procured of the merchants here. Stocks are fairly dry in sufficient quantity to meet the demand.

Receipts of lumber, shingles, etc., for the week ending Aug. 21, as reported by the Lumberman's Exchange:—

RECEIPTS.

	Lumber.	Shingles.
1884	48,907,000	22,755,000
1883	55,205,000	37,455,000

FROM JANUARY 1, 1884, TO AUG. 21, 1884, INCLUSIVE.

RECEIPTS.

	Lumber.	Shingles.
1884	1,056,410,000	532,314,000
1883	1,047,098,000	695,359,000
Increase	9,312,000	
Decrease		163,045,000

LAKE RECEIPTS FROM JAN. 1 TO AUG. 20.

Lumber	958,181,000
Shingles	509,547,000
Lath	39,524,000
Posts	2,553,396
Railroad ties	665,024
Wood, corrs	16,664
Bark, cords	16,263
Slabs, cords	25,431
Telegraph poles	109,320
Spars	12
Piles	250

STOCK ON HAND AUG. 1.

	1884.	1883.	1882.
Lumber & timber	555,403,975	510,799,847	511,903,574
Shingles	321,872,364	323,957,215	244,221,650
Lath	51,582,455	62,109,968	39,459,837
Pickets	1,034,730	1,802,911	1,717,165
Cedar posts	377,658	499,070	298,253

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ℔ M	$53 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	45 00@50 00
Pine, good box	22 00@33 00
Pine, common box	13 00@15 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 16@00 21
Pine, 10-in. boards, 16 ft., ℔ M	28 00@32 00
Pine, 12-in. boards, 16 ft	28 00@32 00
Pine, 12-in. boards, 13 ft	28 00@00 00
Pine, 1¼ in. siding, select	40 00@43 00
Pine, 1¼-in. siding, common	20 00@00 00
Pine, 1-in. siding, select	42 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2¼x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Black walnut, gook, ℔ M	100 @120 00
Black waluut, ¾ inch	80 00@85 00
Black walnut, ¾ inch	30 00@32 00
Scaymore, 1-inch	23 00@25 00
Scaymore, ¾-inch	38 00@43 00
White wood, 1-inch and thicker	30 00@32 00
White wood, ¾-inch	40 00@43 00
Ash, good, ℔ M	25 00@30 00
Ash, second quality, ℔ M	60 00@85 00
Cherry, good, ℔ M	25 00@30 00
Cherry, common, ℔ M	40 00@43 00
Oak, good, ℔ M	20 00@25 00
Oak, second quality, ℔ M	25 00@30 00
Basswood, ℔ M	40 00@40 00
Hickory, ℔ M	28 00@30 00
Maple, Canada, ℔ M	28 00@28 00
Maple, American, per M	38 00@40 00
Chestnut, ℔ M	0 00@ 5 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	4 50@ 4 65
" extra, sawed, pine	0 00@ 3 00
" clear, "	0 00@ 3 30
" cedar, mixed	0 00@ 2 00
" cedar, XXX	0 00@ 2 00
" hemlock	0 00@ 2 00
Lath, hemlock, ℔ M	0 00@ 2 25
Lath, spruce, "	

TONAWANDA.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$42 00@46 00
Common	14 00@18 00
Culls	11 00@14 00

BOSTON.

The *Cotton, Wool and Iron* of Aug. 23 says: The general lumber trade remains quiet, in sympathy with the tone in other branches of business, but there is a fair demand for the season, with a moderately encouraging outlook for fall. Building operations in the supberbs and elsewhere in the shape of moderate cost dwellings continue quite good.

The arrivals of eastern lumber are moderate. There is a fair call for spruce of regular yard sizes, although prices cannot be called strong. Hemlock is in moderate request. Pine boards are dull. Western lumber shows little change to note. Pine keeps along about steady. Black walnut holds its own. Choice cherry is little

changed, but other grades are very dull, and the same is true of ash and poplar. Southern pine continues very quiet indeed.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

OSWEGO, N.Y.

1¼, 1½, 2 & thicker uppers	$42 00@46 00
" " " " pickings	32 00@35 00
" " " " cutting up	22 00@25 00
" " " " cutting up peckings	
peckings and better	32 00@34 00
1 inch selected sidings	28 00@30 00
1¼ " " "	30 00@35 00
1 & 1¼ in. box	12 00@14 00
" " sidings, dressing and better	22 00@25 00
1x10 in. 13 ft, dressings and better	20 00@25 00
" " shipping culls	14 00@15 00
" 14 & 16 ft. dressings and better	20 00@23 00
1x10 in. 14 & 16 ft. ship culls	14 00@15 00
1x12 " " " "	14 00@15 00
" " " dressings and better	20 00@23 00
1¼ in. strips selected	23 00@25 00
1x" " dressings	16 00@17 00
" " culls	10 00@13 00
Ash.	
1st & 2nd, 1 to 4 inch	18 00@22 00
Culls " "	10 00@12 00
Basswood.	
1st & 2nd, 1 & 1¼ inch	18 00@20 00
Culls " "	10 00@11 00
Shingles.	
XXX Pine	3 25@ 3 25
XX "	1 90@ 2 10
XXX Cedar	3 25@ 3 25
XX "	1 50@ 2 00
Lath 1¼ No. 1	2 00@ 0 00
" No. 2	1 75@ 0 00

There is no change to make in our quotations. Receipts at this port are light and trade is unusually dull. The new cut now coming forward has not dried out much yet and is not fit for market.

BUFFALO.

We quote cargo lots:—

Uppers	$45 00@46 00
Common	17 00@18 50
Culls	12 50@13 00

GLASGOW.

The *Timber Trades Journal* says:—The past week's imports at Greenock, Port Glasgow, and Glasgow have been comparatively small for this season of the year, comprising five cargoes of timber and deals and a cargo of mahogany, also sundry parcels of wood goods per steamers, consisting of deals, oak planks and scantling, etc.

Arrivals at Grangemouth, consigned chiefly to Glasgow merchants, amount to a fair total, the carrying tonnage being 2,406 tons, the cargoes chiefly Baltic deals and battens, also one of pitch pine timber,

These importations through Grangemouth and the goods taken by Bowling through the canal to Port Dundas certainly limit the direct importation to the Broomielaw, and these may become more restricted if ample storage accommodation is not provided.

No auction sales have taken place here since those reported in last number, but there are several forthcoming.

The increase indicated in building operations of late and the revival in Clyde shipbuilding should be received with gratification, though, as regards the latter, it is the opinion of some that it is only partial and transitory, the freight market being still depressed. At present there are on the stocks 83 vessels, representing an estimated gross tonnage of 150,000 tons.

Before the Fair holidays the prospects were very gloomy, but within the last fortnight fresh contracts to a large extent have been made, and it is reported that inquiries are in the market for about 50,000 tons more.

LIVERPOOL.

The *Timber Trades Journal* of Aug. 16 says: With few exceptions, we have for some considerable length of time had to report, with wearisome iteration, of quiet business, and this week again forms no exception; in fact, the want of activity in the market has been marked in a greater degree than before. Complaints are general that, so far, the month of August will be a very light one, and the volume of business done will be limited and unsatisfactory, orders from the country being difficult to obtain and not of any great importance when they are got.

Prices all round continue very low, and this should tempt buyers if anything will, but with an unsatisfactory condition of trade existing in the manufacturing districts they are evidently reluctant to buy more than is absolutely required for their most pressing wants. The import continues on a moderate scale, which is satisfactory, as it will admit of some impression being made upon the stocks, and it would be a matter for congratulation if it remains confined to its present moderate limits.

On Thursday last Messrs. Farnworth and Jardine offered a cargo of hewn pitch pine just arrived for sale by auction, but as there was no disposition to buy it was withdrawn and has been stored. Following them Messrs. James Smith & Co. sold a quantity of hewn and sawn pitch pine timber, part of a wrecked cargo brought on from Flores, and though some of the logs were badly chafed and disfigured some good bargains were picked up, as the hewn timber sold at from 9d. to 10d. per cubic foot, and sawn timber at the same prices.

TYNE.

The *Timber Trades Journal* says:—There are a large number of arrivals of wood goods during the last seven days, amongst which may be enumerated several cargoes of staves, three cargoes of prepared flooring boards, and a large number of vessels with props and mining timber. The *Maryborough* has also arrived with yellow pine deals and timber from Quebec, being about the first arrival of the season. No change is to be reported in the aspect of affairs generally; a fair trade is reported to be doing, but no great briskness felt in any department of trade.

AUSTRALIA.

The monthly circular of Messrs. Lord & Hughes, timber brokers, dated Melbourne, June 30th, says:—

The sales by auction have been principally the cargoes of Oregon timber ex Sulitema and Star of Peace, and Red Baltic Deals ex Mississippi, Wanlock, Melbourne, Gustav Adolph; and also lines of flooring.

Sales from the yards are reported to be less than last month, which is necessarily expected at this dull season of the year.

The arrivals have been—Hertha and Ernst, from Laurvig, Glentilt, from Montrose, with flooring and laths; Star of Peace, from Puget Sound, with Oregon timber, laths and pickets; Anahuar and Hoiden, from New York, with clear pine, white pine shelving, laths, plaster and slates; Orient, Sarah Grice, Salamis, Ben Cruachan, Loch Garry, Kelper, Taormina, Sydney, and Assam, from Great Britain, with flooring, lead, galvanized iron and cement; Athene and Varuna, from Hamburg, with cement; Celestia and Fleetwing, from Kaipara, with Kauri pine; Cheviot, Nemesis, Leura, Buninyong and Wendouree, from Sydney, with cedar; Cahors, Buninyong and Wendouree, from Sydney, with galvanized iron and lead; Eveline, from Adelaide, with laths.

Red Deals.—Imports: Nil. Sales by auction have been made ex Mississippi, Wanlock, Melbourne, Gustav Adolph, Atlantic, H. B. A. 11 x 4 realizing 5½d., 9 x 4, 5½d., 11 x 3, 6d. to 5⅝d., ; 9 x 3, 5½ d. to 5⅝d, M. A. B., 11 x 3, 5½d.; 9 x 3, 5d. to 4 7-16d. at per foot of 9 x 3.

Spruce Deals.—Imports: Nil. The only sales at auction have been small lines of Baltic White deals ex Gustav Adolph. We have to report the sale privately of cargo ex Eillan Donan, at a satisfactory figure.

Oregon Timber—Imports: 647,858 feet super. This parcel arrived ex Star of Peace, and was sold by auction on 20th inst., at £6 7s. 6d., and on the 10th inst. the cargo ex Sulitelma was quitted publicly at £6 7s. 6d., to £5 17s. 6d. the bulk £6 5s.

Lumber.—Imports: Clear pine, 130,695 feet super; white pine shelving, 294,002 feet super. The arrivals have been Anahuac and Hoiden, from New York. The parcels ex Anahuac were sold at auction on the 13th inst., Michigan clear pine realizing £15 15s. to £15 7s. 6d.; white pine shelving £9 17s. 6d. to £9 7s. 6d. Other sales have been small lines ex Leading Wind and W. H. Besse.

Pitch Pine.—Imports: Nil.

Redwood.—Imports: Nil. There have been no offerings at auction since our last report.

Flooring and Weatherboards.—Imports: 2,875,700 feet lineal. The arrivals have been—Hertha and Ernst, from Laurvig, Glentilt, from Montrose, Loch Garry, from Glasgow, and Kelper, from London. Sales publicly of various lines have been made ex Hertha, Gustav Adolph, Atlantic, Summarlide, Augusta, Loch Garry, and Loch Torridon. The following were prices realized for Baltic flooring:—Red, 6 x 1⅛, 11s. 3d. to 10s. 9d.; 6 x ⅞, 9s. 6d. to 8s.; 6 x ¾, 6s.; 6 x ½, 5s. to 4s. 9d.; 4-out weatherboards, 6s. 6d. to 6s. 3d.; white, 6 x 1⅛, 8s. 9d. to 8s. 3d.; 6 x⅞, 8s. to 7s. 3d.; 6 x ¾, 5s. 6. to 5s. 3d.; 6 x ½, 4s. 10d. to 4s. 5d.; 4-out weatherboards, 6s. 6d. to 6s. 3d.

Kauri Pine.—Imports: 562,950 feet super. The arrivals have been Celestia and Fleetwing, from Kaipara. The cargo ex Celestia was sold by auction on 13th inst., and the cargo ex Fleetwing has been quitted privately at a price not transpired. Other public sales have been ex Rio, Albert the Good, and L'Avuenire.

Cedar.—Imports: 161,510 feet super. The arrivals have been ex various Sydney steamers, sales at auction being made at up to 57s. 6d. per 100 feet super for logs, prices showing an advance on last quotations.

Doors.—Imports: Nil. There has been no public sales of importance since our last, the only line of sound being 2ft. 6in., 1¼in., d.m. No. 1, ex W. H. Besse, which was sold on 13th inst., at 10s. each in bond (duty, 5s. each.)

Laths and Pickets.—Imports: Laths, 3,939 bundles; pickets, 1,400 bundles. Sales publicly have been made of Oregon laths, 4½ft., at 33s. 6d. to 33s.; spruce, 4½ft., 34s. 6d.; 4ft., 29s. 6d.; Oregon pickets, 4½ft., £8 5s. to £8 7s. 6d.; 4ft., £8 7s. 6d.

Slates.—Imports: 236,665 pieces. These arrived in Anahuac and Hoiden, from New York. Sales by auction have been, ex Star of Scotia, 20 x 10 American blue Bangor, at £10 12s. 6d.; ex Anahuac, 24 x 12, at £14 2s. 6d. to £14,

Plaster.—Imports: 500 barrels. Publicly, 300 barrels, ex Anahuac, of King's Windsor Mills Plaster, have been sold at 10s. 9d., balance of consignment being quitted privately.

Cement.—Imports: 11,225 barrels. The arrivals for the past four weeks are exceedingly heavy. Best brands are selling at 15s. 3d. in fair sized parcels, but 15s. 6d. has been obtained for small lines. We hear of a parcel—2,000 barrels Knight, Bevan & Co.'s—placed privately at 15s. 3d. Several lines of German have been sold at lower rates by auction.

Galvanized Iron.—Imports: 521 tons. Privately, sales have been made of best brands, at £19 10s. to £20, and inferior at £18.

Explanation.—Red deals and spruce deals are sold at 9x3; T. & G. flooring at per 100 feet running; Oregon timber, redwood, clear pine, shelving, ceiling, per 1,000 feet super; Kauri pine and cedar logs at per 100 feet super; laths, pickets and slates at per 1,000 pieces.

An Order-in-Council has been passed reducing the tolls on the St. Maurice slides one-half.

J. S. MAYO

IMPORTER AND MANUFACTURER OF

MACHINE OILS

OF EVERY DESCRIPTION.

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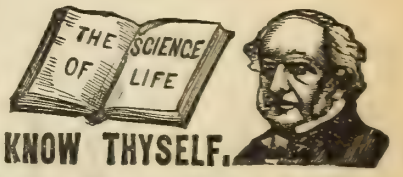
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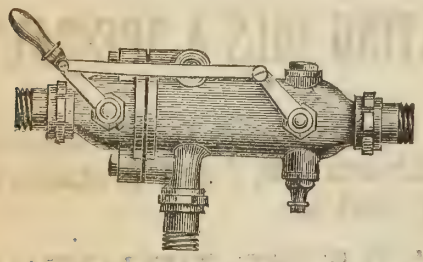
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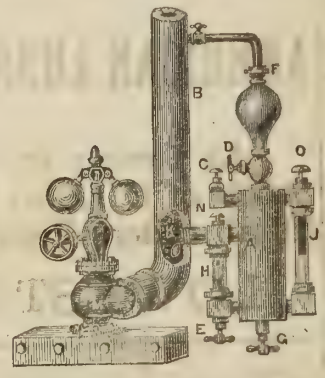
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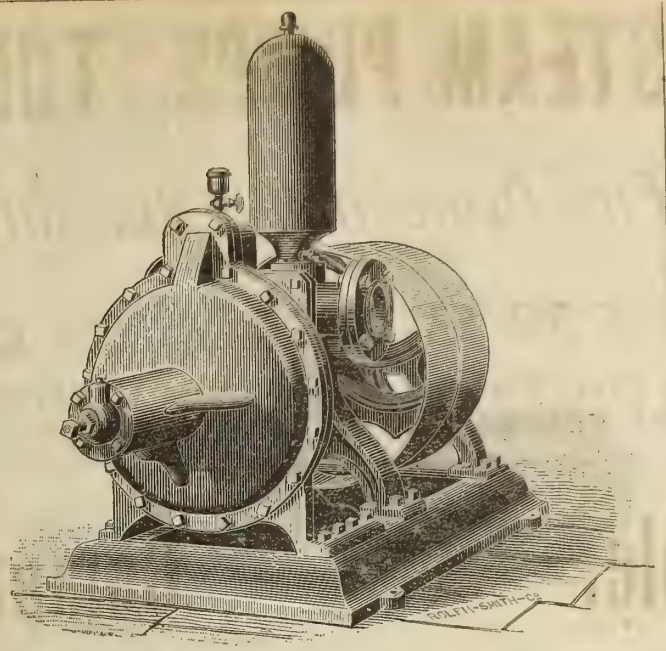
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Yours truly, DR. D. McLACHLAN.

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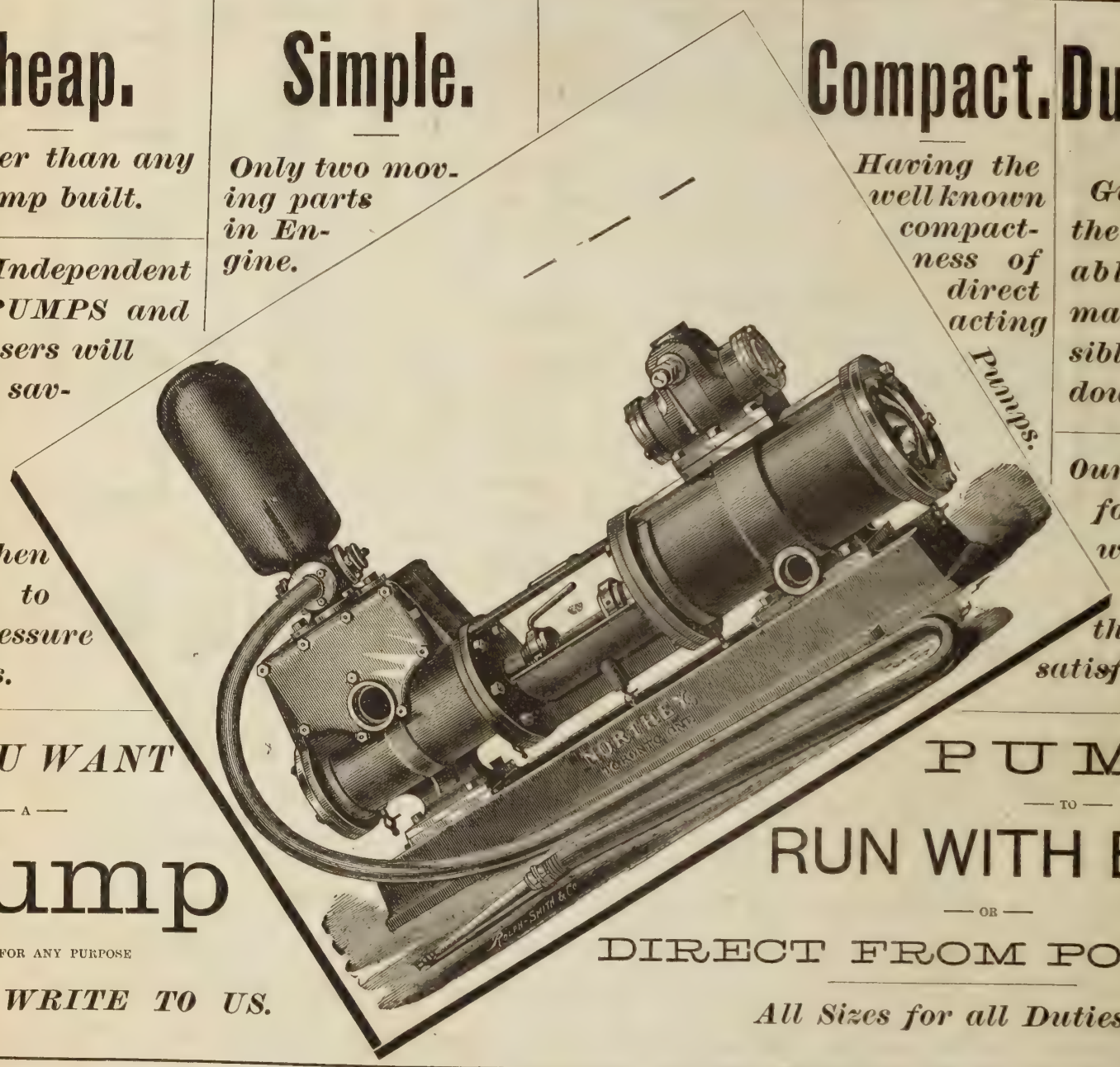
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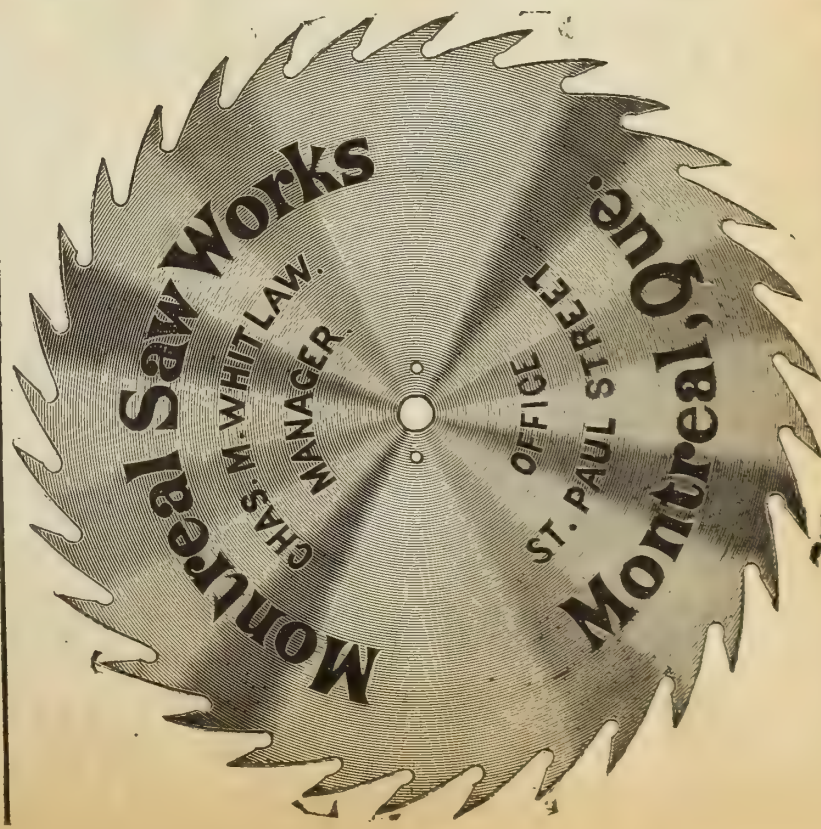
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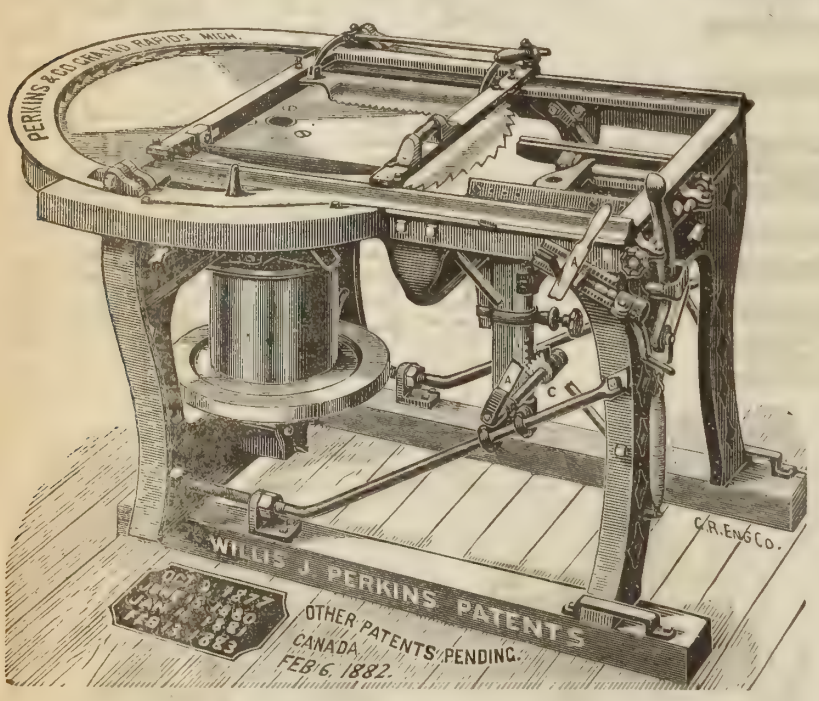
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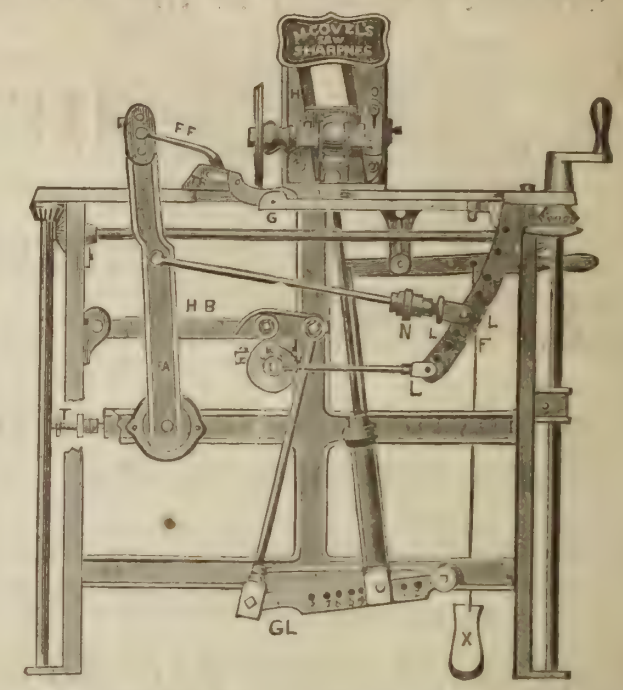
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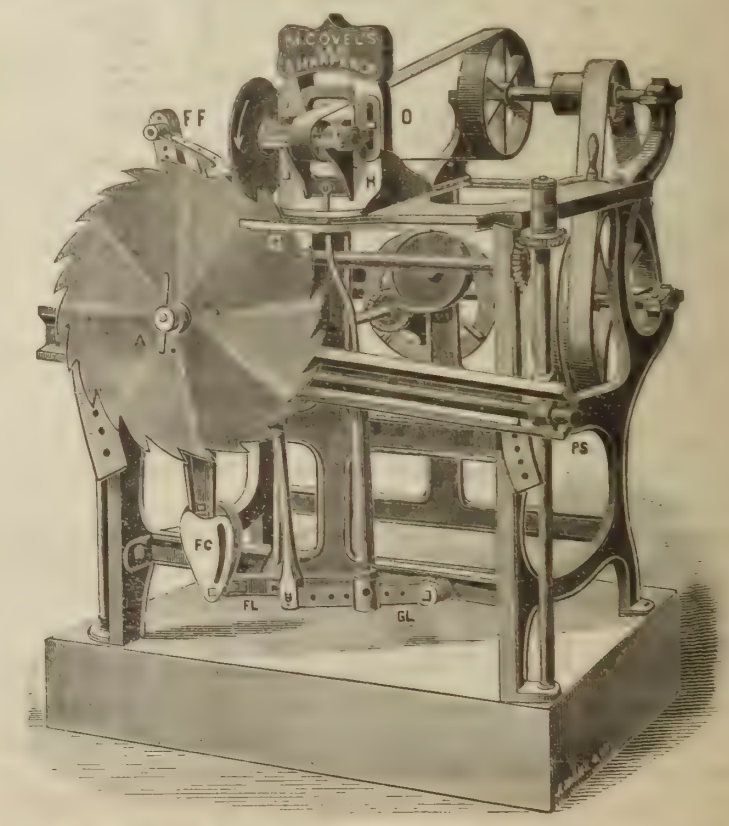
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VOL. 4. PETERBOROUGH, ONT., SEPTEMBER 15, 1884. NO. 18.

ARBORICULTURE IN CANADA.

At the meeting of the British Association in Montreal Professor Brown, of Ontario, read a paper on "The application of scientific and practical arboriculture to Canada." Agricultural countries all complain of want of trees. There is now no question of the value of trees in rural economy; how best to secure full advantage in all their bearings is the question with advanced nations. All nations should have clear ideas of the work to be done before attempting anything. What can Canada do? Two things are necessary to a scientific and practical work in Canada, namely the conviction of the farmers of the necessity of conserving and replanting, and empowering of the Government to reserve tracts for these purposes. The first would, through self-interest, be the most thorough; second, most immediate. Government as a company will have to become foresters. The slowness of the return is the great barrier to replanting. In Europe large tracts are in the hands of one man, whose interest enables him to take wide measures; here, land is so subdivided as to preclude all idea of profitable work. It is harder to re-clothe than to plant for the first time, the chief cause of which is the fact of successive cropping. Trees are not only necessary for shade and shelter, but the climate, temperature, rainfall, moisture and evaporation are influenced by trees. The third great reason for tree cultivation is that the culture is more profitable than agriculture year by year. Fifty per cent. of the cultivated portion of Canada is wooded, as against twenty-five per cent. in the United States. In Canada our need is not for more trees, but for better distribution. Outside of lumbering—a taking without system—there is no preserving, controlling or conserving in any but in an individual ownership here in Canada. The amount of smothering and robbery which goes on in a Canadian forest is great. Our forest should be dealt with in different ways, but on some principles as in Europe, as only 25,000,000 of acres had been cleared for agricultural purposes it may be said that the whole country is still under trees with these exceptions. There are four fields for Canadian forestry. 1st. The untimbered land, such as prairie. 2nd. The older cleared portions. 3rd. The recent forest settlement. 4th. The untouched forest. The proportion of forest to farm land necessarily varies in countries, climate, altitude, latitude, aspect, soil, etc., and can only be settled by practice. The need of shelter should be supplied first, and may be taken as the first measure. That of climate is an unknown one. Everything considered, one-fourth of the surface of Canada should be covered by trees. As this is just one-half of what is at present covered, it is apparent that what we need is regular distribution. Tree planting should not be confined to poor lands, and not merely to high lands. We have soils and climate suitable for all kinds of tree life—from the pine of the north to the walnut of the South. What is advanced in this paper is founded upon an experience of sixteen years' control of the formation, the planting and subsequent management of something like twenty million of trees on the Seafield estates in Bauff and Inverness shires. With regard to prairies of the Northwest, men need never hope to gather wealth by agriculture without the help of trees. There is no such example in the world. There is no great future for Manitoba and the North-West unless preceded by an extensive system of forestry. Trees are needed for roadside shade, shelter for dwellings, for crops, for open grangings and enclosed grangings, wind-breaks and climatic ameliorations. A prairie farm of 160 acres should have 30 acres of timber, 125 acres under cultivation and five acres of orchard, garden, buildings and roads. The roadways of farms should be lined with shade trees, while dwelling-house and orchards should for climatic purposes. Head water plantations must surround or be in the immediate neighborhood of sources of streams. Great wind breaks being needed to fend the smaller plantations as well as districts, have to be carefully outlined, of considerable extent, and must command an exact position. Lesser wind-breaks are planted where larger are difficult to establish. In climatic plantations area is of more consequence than form, as it requires a great field of leaves to effect a climatic amelioration. This address was illustrated by a large map showing exact position form and extent of increasing plantations.

FOREST PRESERVATION AND THE TARIFF.

We repeat the following article from the N. Y. *Sun* because much of it will be interesting to our readers, though of course we do not endorse all the opinions expressed:—

"Serious fires, set for the most part by sparks from locomative engines, have recently devastated considerable areas of forest in the upper and lower peninsula of Michigan and in Pennsylvania. In commenting upon this fact some of the special organs of the lumber manufacturing industry have made the assertion that such fires are, and always must be, inevitable, and that therefore the collection of the duty by the Government of the United States upon lumber entering this country—inasmuch as it hastens, as they acknowledge, the destruction of our pine and spruce forests, by stimulating the manufacture of lumber of these kinds—is a wise and economical measure. A correspondent of the *Tribune* of this city, in an argument against the removal of the lumber duty, states some pertinent and important facts. "I believe," he says, "It is generally conceded by those who are familiar with the subject, that the lower grades of pine lumber are now produced in most cases without profit. As lumbering in Michigan is now conducted, the forests are practically cut clean of every tree that will produce marketable lumber. A further reduction in the price of lumber consequent upon the removal of the tariff would make the cutting of coarse grades of trees impracticable, except at a loss."

The real reason why the duty upon lumber should be removed, and why Congress has thus far utterly and shamefully failed in its duty to the country in failing to consider this great public question upon its merits, is that free lumber will prevent the needless destruction of young and growing trees in accessible forests like those of Michigan or Wisconsin, or of remote mountain forests like those which cover the slopes of the Adirondack Mountains, the chief value of which is found not in the logs which they can furnish to the mills, but in their protective influence upon important watersheds.

The danger of destructive fires in forests in which lumbering operations have been commenced is very great, especially in regions penetrated by railroads; but this danger is not so great as many persons suppose, and it is certainly possible through legislation to greatly reduce it. The lumberman's theory that no forest is really safe from fire until it is piled in a lumber yard is as absurb as it is short-sighted. Forests are successfnlly protected from fire in other countries, like the foot-hill region of India, where the danger and the opportunity for forest fires are infinitely greater than they are in many of our States; and the popular belief, fostered by interested persons who make use of this argument to induce Congress to retain the duty upon lumber, that all our forests must sooner or later fall a prey to devouring flames, will work inestimable injury upon the country. Our forests, unless they are to cease producing valuable timbers, must be worked upon some principle which will tend to continue the growth of the most valuable trees, and so perpetuate their productive capacity. The pine forests of the North are valuable to the country for the pine which they produce, and which the soil and climate of that part of the country are admirable adapted to develop. The other trees which are associated with the pines in these forests are of much less general value. In other regions of the country they attain greater growth and excellence. It is the preservation and perpetuation of the pine, therefore, which offers the principal forest problem to the people of the pine states, like Michigan and Minnesota. In Maine and in the Adirondack regions of this State it is the preservation of the spruce which should receive peculiar attention.

The first steps towards forest protection in this country are only difficult in the careless disregard of the American people upon all questions relating to their forests—a disregard born of the very immensity and wealth of the forests which once covered the whole of eastern America. What is necessary to be done if our forests are to continue indefinitely producing timber as the forests of Europe produce their annual crop with as great regularity as other crops are produced, is to stop the spread of forest fires, to limit the annual cutting to certain fixed regions and the care of such trees as it is desirable to perpetuate to individuals only of a certain size. In northern pine forests the whole stand of pine, big and little, should not be cut off at once, as is now the universal custom. The young half grown trees and tough old ones, to restock the cleared land with seed, should be left to develop. If such a policy of cutting can be inaugurated, and then if the young seedlings and the half grown trees can be protected from fire, which not only destroys the trees, but the best quality of the soil, our pine forests can be made to yield a regular crop every year for all time. The first thing necessary in order to make such a general system of forest management possible, is to remove the false and dangerous stimulant to improper lumbering afforded by the import duty, and so take away what little profit, if any, exists in cutting down half-grown trees and saplings, which would be immensely more valuable could they be allowed to grow to maturity. If there is no longer a profit to be made, however small, in cutting half grown trees, owners will allow them to stand; and that point being gained, it will be less difficult to induce them to wisely gaurd and develop the growth of such young trees. The first step is to remove the duty upon lumber. No system of forest management, however general in its provisions or crude in its application, can be successfully inaugurated in this country as long as the Government pays a premium to the owners of timber land to so manage their property as to insure sooner or later its total ruin.

When it is remembered that the saw logs alone produced annually by the forests of the United States are worth fully two hundred millions of dollars, and that wise and sensible measures have nowhere yet been adopted to maintain this great crop, it is not unreasonable to expect that Congress should take up and consider this whole subject broadly and comprehensively, or, at least, clear the way for the inauguration by individuals or by States of systems of forest management by the removal of the pernicious duty now collected upon imported lumber.

THE Rainy Lake saw mill has resumed operatsons. The mill is now fn first-class working order, and will cut about 30,000 feet of lumber daily. The owners intend to put on a night gang of hands, when the output will be nearly doubled.—*Winnipeg Commercial.*

A SHORT LOOK AHEAD.

The *Northwestern Lumberman* has the following article on the prospects of the lumber trade:—

"The money obtained for farm products is what every retail lumber dealer bases the success of his business upon. In the absence of good crops and fair prices comparatively little lumber is used. The prosperity of a village is gauged by the prosperity of the farmers in the county surrounding the village, and, this being the case, the success of the lumber trade outside of the largest cities hinges largely on crops and the prices obtained for them.

The yield of small grain this year has been bountiful. From some sections there have come complaints, but investigation has proved that such complaints were due in part to poor, grumbling human nature. Not a small precentage of the people never make note of any days except the cloudy ones. The sun shines for others, they think, and not for them. These people, no matter how prosperous, are never contented. If their wheat fields produced 30 bushels to the acre they would call themselves poorly off because it was not 50 bushels, and if it grew in flour in their pantry bins they would think that nature was doing them a wrong because it was not in baked loaves.

In some districts corn is out of the way of frost, while in others a hard freeze would damage it. The season has been so cool that an early frost has been expected, but in the great corn belt it has not yet come, and in a very few days from now it can come with impunity. There is every indication that the corn crop will be immense. The West next year ought to be a country well stocked with well-fed hogs and cattle. Last season a large number of cattle were sold in certain sections because their owners could not feed them properly, and, of course, on the heels of such a condition, the number of hogs in the yards this season is comparatively small.

Still, with good crops of small grain secured, and an immense corn crop nearly assured, the lumber dealers are seriously asking themselves what the outcome will be. Will the farmers sell their grain and corn, or will they hold them? And, if they do sell them, will the prices warrant improvements to an extent to consume a large quantity of lumber? It is no wonder that these questions are asked by the lumber dealers. They come very properly into the consideration of their business plans, and it would be a poor business man who would not give them thought.

That the farmers will sell the bulk of their farm produce cannot be questioned. They raised it for the purpose of turning it into money as quickly as possible, and they will do it for the simple reason that they want the money. Debts are due and must be paid. Improvements in various directions must be made on the farms, and it will take money to make them. It is not the disposition of but a small class to make every thing count for the best. Sacrifices are made every day in the business world in order to get ready money. So many farmers will sell their crops that we expect for the next few months the railways will have about all they can do. In times of a bountiful harvest, no matter whether prices were high or low, such has always been the case, and this year will not be an exception. There are some men who will hold their wheat and corn, but they will be few when compared to the great number of producers. And what object have they in cribbing their products? Crops generally in Europe are good. There is a probability that the European powers will become engaged in war, but the probability is rather remote. All the people of the old world are not so hot-headed as the Freneh, for which let us be thankful, no matter if our wheat and corn sell for a few cents a bushel less than we would be glad to get for them. This not an era of high prices for any line of goods. It is an era of overproduction, and nature seems desirous this season of pointing out to man that she, as well as he, can take a hand at it. The most sanguine do not even predict that any boom in prices is likely to occur in the immediate future. Plenty to eat, and plenty of houses to live in, at moderate prices and rents, is the the outlook. The iron, cotton and coal men are reducing their output; the lumber manufacturers are taking steps to bring about the same result—all acknowledging that in order to go faster they must first drepare by going slow. Such conditions do not point to high prices this year for wheat and corn.

The second question that the lumber dealers are asking themselves ought to be readily settled. Good crops are always productive of increased activity—an activity that is graded by the prices obtained for the crops. If high prices were realized this season, business so brisk that it could be denominated a boom would be the result. There are no such indications, however. The realization of such an event can be expected to be but partial. There will be a quickening of trade, but not in a degree as to show that the flour is wholly prepared for the leaven yet. This, however, must be borne in mind—we are all hopeful. A partial success leads us to believe that the next step may take us to a success that is unqualified, and we discount the future. Such crops as we have are inspiring, and men on the strength of the inspiration will buy as many of the necessities and luxuries of life as they ought to. Their credit will be extended. Neglected improvements will be made. More money will be in circulation. More men will be employed, and a better feeling will prevail. Another fact that we should not lose sight of is that the people of our great country keep marching right on. They are all the time reaching out, and every step necessitates commercial transactions.

Under such conditions there can be no such thing as halt in the lumber trade, this year or any other year as for that matter. Lumber in the very nature of things must go forward steadily. The amount of lumber that is used, and has been used during the past year, we believe has been underestimated because so much has been said and written about overproduction. Because lumber has piled up on the mill yards and docks many are of the opinion that business has been dull at the consuming end of the line. That does not necessarily follow. The facilities for producing lumber have been largely increased year after year. There really seems to be no limit to them, and with the present mill capacity the demand that would call for all that is turned out would be such as no man has ever seen.

Judging from the evidence with which we come in contact constantly, we see no reason to think that the retail trade for the next twelve months will assume smaller proportions than that for the twelve months past, but rather that it will be larger. It is safe to assert that in the next year 6,000,000,000 feet of white pine lumber will be put into buildings and improvements, and if the dealers distribute that amount from their yards, the year will certainly not be one long play day."

CONCERNING CHEESE AND CHEESE BOXES.

We clip the following from the Glengarry correspondence of the Montreal *Witness*:

One of the principal features of note which seemed to interest our visitors on that day, and we are not surprised to hear it, is the cheese box manufactory of Messrs. McPherson, Merrill & Schell, directly under the personal superintendence of Mr. J. T. Schell, one of our latest and most enterprising citizens. The factory was built about eighteen months ago in connection with their saw and shingle mill, for the purpose of manufacturing cheese boxes to meet the demand of the factories under the direct control of Mr. D. M. McPherson, our "cheese king." The enormous quantity of one thousand boxes a day are made and despatched to all parts of the country and accross the river St. Lawrence, and a large quantity of material ready prepared is shipped daily to all points. Last week over seven thousand boxes of cheese were shipped to England from the different factories, and Mr. McPherson has received further orders from the Old Country for ten large cheeses, each to weigh from seven hundred to one thousand pounds. The average yield of cheeses of the different factories, so far this summer, is seven hundred per day, a decidedly encouraging outlook. A factory run with such activity and push must naturally prodnce a good effect in a small place like Alexandria, both to the working classes and the stores. To such of our readers who may chance to visit Alexandria, we feel sure a visit to this factory, to witness the manufactoring of these cheese boxes, will prove interesting. With that indomitable push and enterprise which have characterized Mr. C. T. Schell since his arrival in Alexandria, he has planted in our midst a most flourishing concern. We now learn that this gentleman is about to erect a new saw mill at or near the "Dingwall Farm," in the fourth concession of Kenyon, adjacent to the track of the Canada Pacific Railway, which will give him splendid facilities for transporting lumber and cord wood, etc., to Montreal and the American markets. Such business speculations are all worthy of success, bringing with them as they do a home market for the deserving farmers.

CONSERVATION OF FORESTS.

Mr. R. W. Phipps, whose activity in the political campaign of 1878, will be remembered by most people, is now visiting the capital for the first time and in an official capacity. A few years ago he was appointed forest conservator by the Ontario Government. In that position he has shown himself to be surprisingly efficient, and collected a mass of information respecting the forests of our province, and the best means for their reproduction, which is invaluable. He intends to go along the Canadian Pacific as far as Lake Nipissing for the purpose of personally inspecting the forests of the Ottawa Valley and intermediate district, and determining what suggestions are necessary for their preservation and reproduction. In his next report the result of his visit will be published, and we anticipate it will contain some fine specimens of word painting descriptive of the Ottawa Valley's forest wealth and scenery. While in this city Mr. Phipps has been interviewing individually the prominent lumbermen and soliciting their co-operation in proposed measures for forest preservation and reproduction. They have invariably approved warmly of his aims, and promised every co-operation in their power. It is probable a general meeting of lumbermen will be called, for the purpose of conference with Mr. Phipps and an exchange of views.—*Ottawa Free Press.*

A DULL WINTER.

The coming winter is likely to be the dullest in the lumber trade which this district has yet seen. There have been very few sales of lumber this summer and all the mills are overstocked in consequence. The Parry Sou Lumber Company's mill here has been closed down, possibly for the season, and, unless shipments are made immediately, the Conger Lumber Company's mill will have to shut down for want of piling ground. The mills at Byng Inlet belonging to the Georgian Bay Consolidated Lumber Co., are also to be closed down for the season shortly. The upper mill is expected to run about three or four weeks and the lower mill is to run only about two weeks and, it is said, will be closed down the whole of next summer. All the different lumber companies are going to largely reduce their winter operations in the woods and the cut of logs this winter will not be one-half as large as that of former seasons. Altogether the outlook in the lumber trade in these districts is anything but promising.—*Parry Sound Star.*

SPONTANEOUS EXPLOSIONS.

Herr Baehr, of Dresden, has been conducting a series of experiments in the Royal Theatre in that city, whose results are of the highest importance in elucidating the causes of the spontaneous explosions that sometimes occur in flouring mills. He has found that the leather belts employed for the transmission of energy in manufactories are such rapid generators of electricity that flour malt and other finely divided forms of dust may be spontaneously fired and exploded thereby. Accidents of this kind, due no doubt to the cause exposed by Professor Baehr, have frequently taken place in large mills in this country; and, as any finely divided form of dry combustible material is liable to be thus exploded, the contingency is one against which proper provision should be made.—*Ex.*

THE PALMETTO.

Another use has been discovered for the once universally despised palmetto. The fine fibre obtained from the inner lining of the bud is now manufactured into a substance so closely resembling human hair that it is employed as a substitute for the genuine article, and now ornaments the graceful head of beauty. It can be had of any length, and being capable of taking any color, the ladies can now indulge in brown, flaxen and auburn treeses. Thus, not only the hat, but the glossy locks upon which it rest, are now furnished by the palmetto, from which source also come the fan to cool the brows and the material to stuff mattresses whereupon to repose the wearied body. Paper, fiber, hats, fans, hair, etc., are now furnished from palmetto, and it will yet provide material for cordage and clothing.—*Ex.*

NEWLY-DESIGNED MACHINES.

The Egan Company, of Cincinnati, Ohio, have just completed several newly-designed machines of special interest to large number of wood-workers on account of the many fine points embodied in their construction. Among the number we may mention their fast-feeding special flooring machine, which will turn out a first-class quality of flooring, in either hard or soft wood, at the rate of 100 lineal feet per minute. This machine is provided with three pair of large feeding rolls, and it will work stuff nine inches or 14 inches wide by three inches thick, finished sizes. Their new self-feeding rip-saw is well adapted for use in any factory where a large amount of ripping was to be done, as the work performed by it is much more rapid, as well as more smooth and even than can be done by hand. The company have already placed several of each of these machines with parties who had thoroughly canvassed the market and finally decided on the Egan Company's make.—*Lumber Trade Journal.*

A BRIGHTER OUTLOOK.

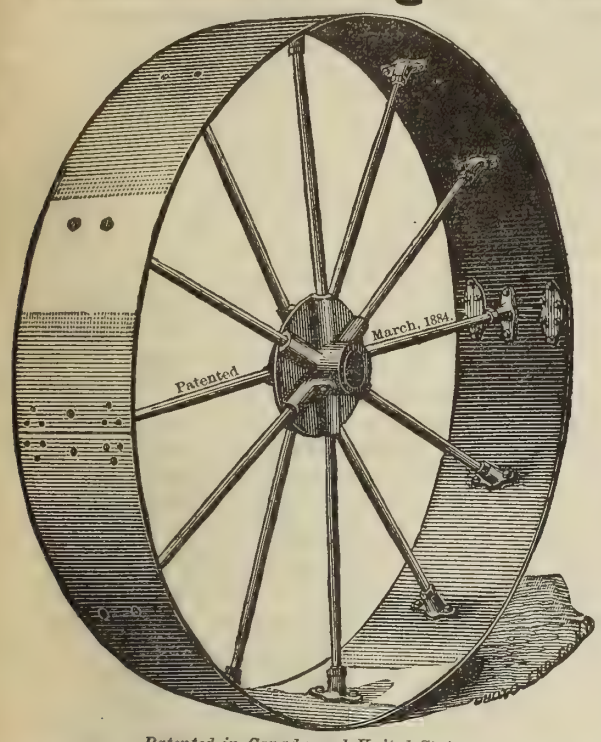
The import list this week is a somewhat formidable one, and includes 25 vessels from Sweden; 13 from Russia, and eight from Canada. There are 25 steamers and 35 sailing ships, making a total of 60 against 74 the corresponding week last year. At that time there was a marked preponderance of steamers, 46 being of this class; so that though the present week's import is undoubtedly a heavy one, it is not so large, fortunately, as twelve months ago. Trade is now duller than it was then, though the prospect of improvement is somewhat brighter than it appeared the autumn of 1883. Then there was nothing to ground any hopes upon of a change for the better. Now the outlook is much brighter, and in the present unsettled state of the foreign markets; and the disturbance between France and the Chinese empire, the chances of the shipping trade improving are every hour becoming greater. The blockade of the Chinese harbors would throw tonnage on the market; but to carry on such a distant war the French will be compelled to utilize all their vessels for transports, and in this way the Mediterranean trade will be almost entirely in our hands.—*Timber Trades Journal.*

Tree Planting in the Northwest.

One of the measures before the Northwest Council, now in session, is the introduction of an ordinance providing for the encouragement of those who will undertake the work of planting out trees on the prairies, both for the purpose of raising timber belts on such portions as are of little value for cultivation, and to create wind-breaks around homesteads and along the roadsides for shelter and shade. In either case it is most desirable that the encouragement to be given should be of a liberal nature. There is nothing, we believe, in either the climate or the soil to militate against success, except that the varieties of trees to be tried should be those best adapted to exposure. The experiment need not be a costly one, and a beginning might be made by planting out those sorts that are indigenous to the country or to localities with a winter climate equally as cold.—*Calgary Herald.*

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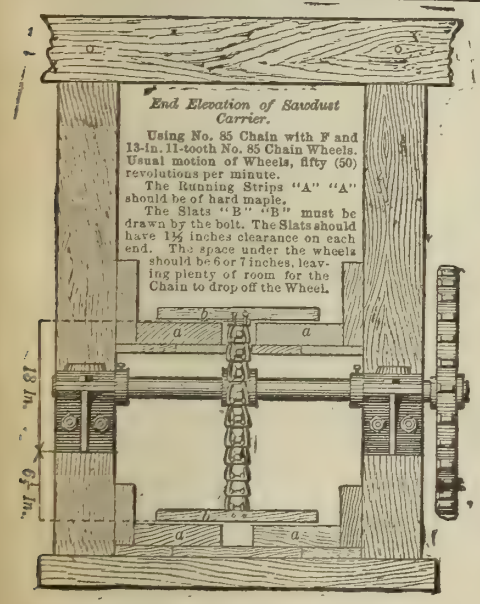
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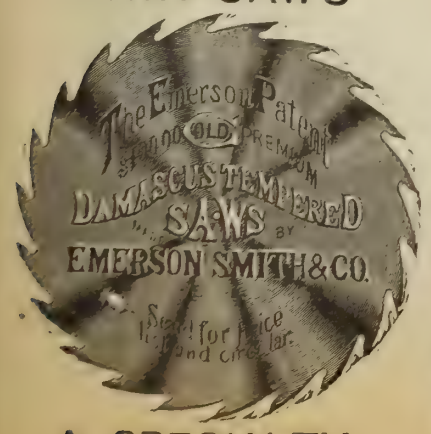
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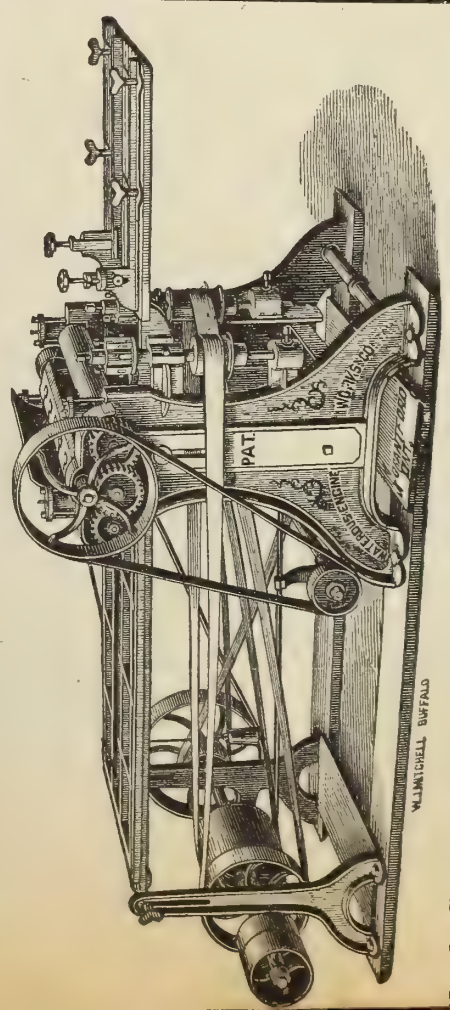
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52	"	20	"	"	6	"	73	" 20 " " 8 "	
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BRANTFORD CANADA.

LOOK OUT FOR FIRE.

One can scarcely pick up a paper, says the *Lumber World*, and glance at its news columns without finding brief particulars of the burning of one or more saw mills, planing mills, furniture factories or other wood-working establishments. We believe we are safe in saying that the proportion of insurance to loss, is less in the case of the burning of wood-working shops than in any other class of industrial establishments, powder mills, of course, excepted, while as a rule, the premium rates for reliable indemnity, are much higher than upon most other classes of risks. This premium rate is so high indeed, as to be, in some cases, almost prohibitive, and loss sustained must, in some instances, be absolute. We know of no class of industrial establishments where vigilance to prevent fire possibility would return so handsome gains as in wood-working shops, and we known of no class where greater apparent carelessness is exhibited. There are many, very many exceptions. We do not make this assertion as sweeping in its nature, but these exceptions do not, usually, from internal causes, go up in smoke, and some of them to our knowledge, carry no insurance whatever. They exercise most scrupulous vigilance to prevent ignition upon their own premises, and the result establishes the wisdom of their course.

This matter of carefulness in the avoidance of fire has been so frequently written upon that scarcely anything new remains to be said. It is doubtful if the habitually, or naturally, careless man will be impressed, except it be by a fire upon his own premises, and even this, except the origin be directly and indisputably traceable to carelessness, will be devoid of beneficial result, and the occurrence be ascribed to "jist my darned luck." When a man's pocket is in danger one would naturally anticipate that he would exercise every precaution for its preservation, but, seemingly, the danger is under-rated or not fully comprehended by very many owners of wood-working establishments.

THE DULUTH FIRE.

The saw and planing mills at Duluth, Minn., operated by Little & Simonds, together with 7,000,000 feet of lumber were burned August 23. The saw mill was owned by Little, Peck & Co., whose loss is $40,000. The planing mill was owned by D. E. Little; loss, $25,000. Little & Simonds lost 4,000,000 feet of lumber and 3,000,000 lath, valued at $50,000; insurance, $29,000. Cutler & Gilbert lost 3,500,000 feet of lumber, valued at $35,000; insurance, $20,000. The total insurance was stated to be $94,000. Other saw mills in the immediate vicinity had a narrow escape. Little & Simonds have 3,000,000 feet of logs left and will continue business. The mill will probably be rebuilt in the fall.—*Northwestern Lumberman.*

THE LUMBER INDUSTRY.

It is predicted by those who have given their attention to the subject that ten years hence the lumber industry will be transferred from the northern lake region to the south. It is an enormous interest. In 1880 there were 25,708 lumbering establishments in the country, employing $181,000,000 capital, and 146,000 hands, distributing $31,845,000 a year in wages, using $146,000,000 worth of material, and turning out an annual product of $233,000,000. Michigan stands first with a product of $52,449,000; next comes Pennsylvania, with $22,457,000; Wisconsin, with $17,952,000; New York, with $14,356,000; Indiana, with $14,260,000; Ohio, with $13,864,000; Minnesota, with $7,366,000; Maine, with $7,900,000. The Southern States make a very small showing, few of them reaching a product of over $4,000,000. But Michigan is consuming her lumber material at a frightful rate. The magnificent pineries of Michigan and other states in the lake region are disappearing before the chopper's axe and sawed into boards for building farm houses and towns in the prarie regions of the west. In a few years they will either have been destroyed entirely or so greatly impaired as to ruin the vast industry and trade of which they are the basis. But the whole south is a forest region, and its gigantic pineries, cedar, poplar, cypress, and oak district s ill almost untouched; and when the lumber supply in the lake region shall begin to fail, as it must in a few years, the great saw mills in Michigan, Wisconsin, Minhesota, northern Ohio and northern Indiana will be removed to the southern forests, and these will become the new centres of the industry.—*Journal of Progress.*

THE FORESTRY CONGRESS.

At the annual meeting of the American Forestry, Congress, which will be held at Saratoga, N. Y., on Sept. 16th, the following topics will form the basis of the discussion :—

1. The mercantile significance of the Adirondack forests for the State of New York.
2. Statistics of deforestation of the Adirondack region.
3. Present condition and comparative value of the Adirondack forests at present and under more systematic management.
4. Attempts at legislation for the benefit of the Adirondack forests.
5. Hydralic influences of the Adirondack forests.
6. Causes of, and provisions necessary to prevent, destructive fires in the Adirondacks.
7. Management of mountain forests.
8. Methods of re-foresting waste places, mountainous and stony grounds.
9. Forests supplies of the eastern states.
10. Suggestions for a forest policy of eastern states.
11. Canada's method of lumbering.
12. "Pruning the forest."
13. Formation and work of local forestry associations.

BIG RAFTS.

Two of the largest rafts of pine longs ever brought to this port, and the only rafts ever brought from Lake Superior, lie just inside the breakwater. One covers about five and the other eight acres of territory. The largest raft contained about 3,000,000 feet of lumber, and the smallest a little over 2,000,000 feet. There are in both rafts about 16,000 logs, ranging from 12 to 16 feet in length. The rafts left a point on the south shore of Lake Superior between Grand Marias and Grand Island, about 100 miles west of the Sault, a little more than two weeks ago. They were made up in two sections each, pear-shaped, and enclosed in booms. Through the rivers the sections were towed separately, and they also went through the rapids in the same shape without loss or damage. The run is about one mile in length and the fall in the neighborhood of 20 feet. The entire distance from start to destination is 600 miles. The run from Detour was made in 14 days, the average speed being about 1½ miles an hour. There were four tugs, the Winslow, Mocking Bird, Jas. Reed and D. L. Hibberg. The tug bills run from $150 to $200 a day, with half pay when detained by bad weather. The enterprise is a new one, and the projectors, H. C. Thurber, of Marquette, and R. K. Hawley, of this city, are rather proud of their success, a number of lumbermen having prophesied that it was impossible to bring rafts though the rapids. Although at the present low freight it would be about as cheap to bring the logs down in the shape of lumber, the owners announce their intention to start another big raft from Lake Superior this season and to keep it up for some time to come.—*Cleveland Press.*

AN INTERESTING DECISION.

A case of peculiar interest to lumbermen and particularly to inspectors was decided before the arbitration committee of the Lumberman's Exchange a few days ago. As has been reported in these columns a cargo of lumber arriving from Ludington was remeasured, and the Chicago inspector reported a shortage of 9,000 feet on the Ludington tally. The chief inspector, under whose control the remeasuring was done, proposed that a disinterested chief inspector should send a man to Peoria, whither the lumber had gone in canal boats to verify the tailles. The consignee of the cargo at this point preferred to notify the Ludington inspector, who in turn decided to be personally present at the Peora measurement, the chief inspector sending a journeyman from Chicago to assist him, paying all the bills of the journeyman inspection. The cargo was found to be full measurement, according to the original Ludington tally, and the Ludington inspector presented a bill for his time and expenses, which the Chicago chief inspector contested as to a portion of the charges. The arbitration committee before whom the matter was brought rendered a verdict in favor of the Ludington inspector for travelling expenses and board, but ignored his claim for compensation for the time spent by him. The committee in the award—after stating that, no similar case having heretofore presented itself, they had no precedents to guide them in arriving at a decision—lay down as the rule adopted by them as follows:

We believe that in disputes arising out of the retallying of lumber the party in error should pay all legitimate expenses arising out of such error. We believe that both parties should be entitled to representation in the consideration of the correction of the error, but do not think the personal time of a principal should be charged in cases where a revision of the tally can be readily made through one disinterested party.—*Northwestern Lumberman.*

A NOVEL ENTERPRISE.

Mr. C. A. Hege, of the Salem Iron Works of North Carolina, has a novel enterprise now under way at that place. Near the coast of many of the Southern States are large quantities of cypress timber, of the finest quality which, owing to its nature cannot be successfully rafted. The enterprise referred to is to cut this timber on a boat especially arranged for the purpose, and for which Mr. Hege is to furnish the machinery. The boat will be supplied with the necessary engine power, and with a 70 feet double and a 50 feet single saw mill, a direct acting steam gang mill, with edgers, cut-off saws log turners; in fact, with all modern appliances for expediting work, and thus equipped will proceed along the coast of North and South Carolina, Georgia and Florida, cutting lumber along the route. The timber can be bought cheap, and the experiment, if successful, will be of considerable importance.—*American Machinist.*

TRANSPLANTING TREES.

Until within the past few years it was generally thought that quite young trees could be successfully transplanted, and horticulturists and arboriculturists invariably recommended that young trees be selected for transplanting. Horticulturists asserted that a two year old apple tree transplanted would become fruit bearing sooner than a tree transplanted at four years old, and arboriculturists insisted that it was next to impossible to transplant successfully any but quite young forest trees. The experience of the past few years has demonstrated that old trees of any kind may be transplanted as successfully as young trees. Full grown forest trees, such as oaks, maples and hickories, are now removed for miles without injuring them in the least. The method of removing old trees is not as well understood as that of removing young trees, and hence even now in the majority of cases the work is not successful, and young trees are generally chosen for transplanting, thus compelling those desiring the luxury of fine shade trees to wait a number of years for the trees to grow. The season for transplanting old trees is in the latter part of winter, the frozen earth surrounding the roots being elevated carefully with them so as not to disturb the roots, and all placed in the excavation made at the new location. The circle of earth around the roots should be large enough to secure as many of the long roots as possible. After the tree is securely placed in the ground strong stakes or posts should be placed around it, and ropes or wires fastened in the tree top and at the other end to the posts, to prevent the wind from moving the tree about and disturbing the roots. This latter requirement being often neglected is the reason for so much failure in transplanting old trees. If the branches of the tree are large and spreading, a portion of them ought to be cut out, confining the cutting as much as possible to the last year's growth. It is considered a good plan to trim a tree intended to be moved a year before the work of removal is done. It is not necessary to fasten trees in the manner mentioned transplanted at the age of two or three years, but trees older than that should be so fastened. This requirement was neglected in the work of transplanting trees in Summit Avenue Park, and the result is that twenty of them have already died and the balance of them are in a fair way to die.—*Lumber Trade Journal.*

THE STRONGEST TIMBER.

A general impression has existed that slow-grown timber is the strongest, but this opinion does not, it is stated upon highly scientific and reliable authority, stand the test of practical and powerful experiment. There is in London, England, a government establishment for testing the quality and strength of all woods and metals used for government purposes, the chronicles of which are said to be extremely interesting. Among other important things which have been proved there is the fact that fast-grown timber—oak at least— is the strongest, and bears the greatest degree of tension. This remarkable fact has also been discovered recently in some of the eastern wood-working establishments, where oak and other fast-grown woods are wrought into furniture, building materials, and other commercial shapes that require substantial and great tension. A prominent stair-builder, who has erected several massive and elegant stair-ways in the government buildings at Washington, D. C., has informed the writer that timber of a rapid growing nature is the best for the architectural interests he is engaged in.—*American Lumberman.*

DRYING LUMBER.

A new process for drying lumber is just now attracting attention. It is said to be the best and most effectual and economical method ever practiced. No kiln is necessary, although where a shop has one it can be utilized to an advantage. The process has the great advantage of keeping the surface of the lumber moist during the drying; this holds the pores open, obviates all tendency of cracking and leaves the albumen free to perform its functions. In ordinary kiln-drying the albumen is killed or destroyed, and surface drys first, thus sealing the juices inside, to escape eventually through cracks caused by the uneven expansion of the wood. Some readers may perhaps be surprised to learn that the process consists of surrounding the wood to be dried with common salt; but those who are acquainted with the peculiar power for extracting moisture which salt possesses will not be at all astonished at this novel and ingenious utilization of this power.—*Builder's Journal.*

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c, measured and culled to date :—

	1882.	1883.	1884.
Waney White Pine..	1,478,304	2,114,484	1,520,580
White Pine.....	5,975,135	4,443,559	2,192,314
Red Pine.....	1,000,713	327,112	259,079
Oak.....	846,051	1,273,741	546,792
Elm.....	495,891	302,412	637,893
Ash	200,393	211,677	375,316
Basswood	815	2,145	3,992
Butternut.....	2,288	989	1,121
Tamarac.....	4,835	4,990	18,633
Birch & Maple.....	262,417	137,249	185,156
Masts & Bowsprits...	33pcs	—pcs	—pcs
Spars.....	51 pcs	— pcs	41 pcs
Std. Staves.....	292.5.0.16	509.5.2 10	38.1.2.25
W. I. Staves.....	871.1.3.16	449.1.2.9	78.0.0.26
Brl. Staves.....	21.9.3.26	87.1.1.27	0.6.2.13

JAMES PATTON,
Quebec, Aug. 29. Supervisor of Cullers

THE planing mill of Joseph Ainaly, Scranton, Pa., was burned August 26, together with a large quantity of lumber. The fire broke out in the sash and glazing factory. Loss, $75,000; insurance, $7,000.

AT Vincennes Ind., 15, August, fire broke out in Tynolph & Co.'s lumber yard. About 750,000 feet of lumber was burned, together with barn belonging to the firm, with its contents of hay, 500 bushels of oats, a large quantity of corn, four horses and six mules. Loss, $15,000; insurance, $10,000. The mill was saved. The origin is supposed to have been incendiary.

COVERING PULLEYS.

A carrespondent of *Cotton, Wool and Iron* tells how he covers a pulley with leather :—"First drill holes in the rim of the pulley of the size of copper rivet—that will be the right length to go through leather and pulley rim ; drill the holes so that rivets will go in free, or you will have trouble in their upsetting before you are ready for that. For that size pulley we should drill holes three-eights of an inch from edge of pulley and about six inches apart ; and across the face of the pulley, where the butt comes, we should put four holes in each row and have the rows one inch apart, and in both cases we should put the holes opposite of each other—that is, on each edge of the pulley and across the face. But should he prefer to make a nice joint that will not show where it was made, he will, of course, have to make a long lap joint, and in that case the cross row of holes would need to be much further apart ; however, we prefer the "butt" joint. The next thing we take the leather to be used, and if there are no joints in it, soak it thoroughly in water. If there are lap joints in it, wet all it will bear without breaking them ; next rivet one end of the leather across the face ; the leather being wet the rivet heads will sink below the surface. Now rig up some kind of a purchase to stretch the leather, and only do it as you go from hole, that is stretch to one hole and rivet both sides at the same time ; and when you get at the last row stretch same as before and cut a little short, one-sixteenth of an inch, and punch holes back the same and draw up with a pointed pin inserted in the holes of pulley. Now if the leather should "hump" a little between the rivets don't be alarmed ; run your belt on before the cover is quite dry and they will soon be out."

READY MADE HOUSES.

Besides the general demand for all sorts of machinery in Buenos Ayres, there is a new branch of business opened in the demand for ready-made houses ready for erection. Concerning this branch, Consul Baker says, in his report to the State Department at Washington : "Several shipments on a large scale have already been received, and are now in course of erection in the embryo city of La Plata, the new capital of the Province of Buenos Ayres. The demand for habitations at that place was so great that the provincial government could not wait the slow processes of brick and mortar. I understand that upwards of 1,500 are now being put together at that place, and the price is so reasonable that a number of *estancieros*, who are improving remote cattle farms, have also determined to try the virtue of those houses. Should they meet the expectations of the Argentine people a large trade in them is likely to result. The only fear is that, owing to the heavy southwest winds which prevail here, they may be found to be too light." Furnishing houses ready to put together is a business which Canada ought to be as able to do as the United States. The lumbermen of Ottawa and St. John rivers could surely fill this kind of a bill in first-class style were they to try it in earnest.—*Canadian Manufacturer.*

Canadian Raftsmen in War.

A new work has been found for Canadian raftsmen. Lord Wolsely, who conducted the Red River campaign in 1870, and has a knowledge of Canadian raftsmen, will take 600 with him on the expedition to rescue General Gordon in Africa. The raftsmen are required for services on the Nile. This will be a novel sphere for the men, but doubtless they can "run" the Nile, or force their way up that stream, with as much success as they can carry on the lumbering business on the Ottawa and the tributaries of that river and the St. Lawrence.

THE lumbermen's agents have no more difficulty this year in hiring men than heretofore, but the question is where the men want to go. Is it up the Ottawa or up the Nile. An experienced lumberman says that rafting alligators is a better occupation than rafting logs, at least he is reported to have said so.—*Ottawa Citizen.*

WOODEN PAVEMENT.

In Paris a wooden pavement is made that promises for durability to far ahead of anything in the shape of a pavement that has yet been invented. The blocks are compressed with powerful machinery, which closes the pores of the wood, and then laid upon a foundation that holds them securely in place. The Nicholson pavement has proved a failure, because so short lived, but much as has been said against it, it has saved millions of dollars worth of horse flesh. Continual travelling on stone uses up horses exceedingly fast, notwithstanding which it has looked for some time as though stone must stay and the horses go. But now we notice that in London, as well as in Paris, there is a wooden pavement laid that is lasting and satisfactory in every respect, and we believe the system is about to be, or has been, introduced into New York to some extent. Earth is easiest for a horse to travel on ; next in point of ease is wood, and now that a wooden pavement has been invented that answers the demands, its use will add to the comfort of the horses, and benefit the pockets of their owners.—*Northwestern Lumberman.*

A HISTORIC TREE.

A correspondent of the Williamsport *Gazette* writing from Peuble on the Arkansas river, gives the following interesting facts regarding a famous tree, a portion of which is lying at that place :

Age 380 years. Circumference 28 feet. Height 78 feet. Was cut down in South Pueblo, June 25, 1883, at the cost of $250. It was known throughout Colorado as the oldest landmark in the state during the Pike's Peak excitement. The tree sheltered many a weary traveller. In 1850 there was 36 persons massacred by the Indians while encamping near this tree. Kit Carson, Wild Bill, Buffalo Bill and other noted Indian scouts, have built their camp fires under this tree. It is claimed that 14 men were hung on one of its limbs at different times. The first woman that died in Colorado was buried under its branches. The above facts are from good authority.

"The old monarch" was finally felled because it occupied too much room in one of the streets of the new town.

PAINTING SHINGLED ROOFS.

More shingle roofs are painted now than ever before in the history of building in this country. It is mostly seen in cities and surburban towns, although in the country it is by no means rare. Considerable inquiry has led to the conclusion that many have their roofs painted to add to their appearance, which in many cases it certainly does, while others labor under the impression that the paint acts as a preservative to the shingles. The latter are probably right, provided the paint is renewed as often as it needs to be. If the roof is allowed to remain with the paint partly worn off the shingles it will retain more moisture, and consequently decay sooner than they would were they not painted at all. On the score of durability, however, little can be gained in cost by painting. A good shingle roof unpainted will last a great many years, and the expense of painting it a few times would replace it. One painter who had painted the roof of his own house, when questioned by a representative of the *Lumberman*, used good logic from his standpoint. He thought that painting a roof would add somewhat to its length of life. "You see," he said, "that I have painted mine. I do for myself what I desire to do for others. If I did not, the influence would be bad."—*Exchange.*

American Forestry Congress.

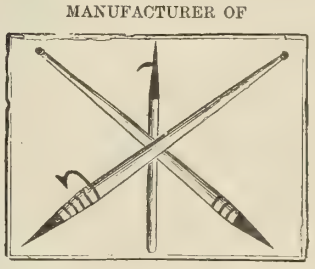
A circular has been issued by Mr. B. E. Fernow, corresponding secretary, calling attention to the annual meeting of the American Forestry Congress, which will be held this year at Saratoga, N. Y., on 16th Sept. The denudation of the forests of the Adirondack region concerning which there was so much discussion in the New York newspapers last summer, will form the subject of several debates. Among the subjects of special interest to Canadians will be "Canada's Method of Lumbering."

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DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & CO., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., SEPT. 15, 1884.

FOREST fires recently devastated thousands of acres in Maryland along the course of the Captauk River.

FOSTER, BLCKBURN & Co., lumber dealers, of Big Rapids, Mich., have failed, liabilities $100,000, assets about the same amount.

THIS fall the Rathbun Company, who have a branch of their business here, will transhipp 9,000,000 feet of lumber from Ottawa for Oswego, at Kingston.

THE famous lumber account of the Federal Bank has been sold to Col. Tisdale, of Simcoe, for $800,000, which is equivalent to about 61½ cents on the dollar.

LEWIS DRAKE was drowned in the Otonabee river, about four and a half miles above Peterborough, on Sept 8. He was engaged on Mr. Alfred McDonald's drive.

MR. JAMES BRYANT is about erecting and equipping a steam saw mill in Lutterworth township. With Mr. Bryant's energy there can scarcely be an impediment to the success of the enterprise.

A SALE of W. B. McAllister's timber limits on the Indian River was made to Jas. McLaren of Ottawa. The price paid was $35,000. The same limits were bought by Mr. McAllister two years ago for less than $24,000.

WOODEN water pipes were recently dug up in Philadelphia that were laid eighty years ago. The bark and heart of a spruce pipe was sound, but the sap was decayed. A red oak pipe was decayed on the under side, the upper portion of looking nearly as fresh as if recently laid.

LETTERS have been received in Halifax announcing the failure of the old established firm A. W. Perot & Co., of Demerara. This firm one of the largest businesses in the West dia Islands, had a branch house in Baltimore, d were supposed to be wealthy. Their down- ll is said to be caused by the enormous rinkage in the value of sugar.

"I'm going to board," was what the log remarked on entering a saw mill.

THE lumber trade has evidently not been extremely light in Ohio and the east, but a very even demand has consumed vast quantities of the Saginaw valley product. A gentleman, just returned from Ohio and the east, reports stock in the retail yards, as well as in most of the distributing centres, as unusually light, and predicts a lively fall trade from the middle of September, forward.—*Lumberman's Gazette.*

AN extensive purchase of lumber is stated by the Brockville *Recorder* to have been made at Ottawa recently by the Oswego Manufacturing Co., for the manufacture of boxes in which to ship Pennsylvania kerosene oil to foreign markets. The whole shipment, several million feet, is to be made by barges from Ottawa. The Oswego company named is said to be "backed or owned" by the well-known Standard Oil Company.

RECENTLY the steam barge United Lumbermen, bnilt at Squire Trerice's shipyard, Dresden, come into Chatham from Midland, with 160,000 feet of lumber, 35,000 of lath, and 4,050 cedar posts, which cargo she is discharging at his docks for Mr. Piggott. Capt. Morden and all hands, including Tom, the wheelman, are well. Tuesday, she unloaded lath and cedar posts at Amherstburg. She encountered light, baffling winds on the voyage, drew 10 feet 6 inches, and attracted much attention in Chatham, being the largest lumber vessel which ever entered this port.—*Chatham Planet.*

THE Pilot Mound *Signal* says:—Amongst other annoyances to which the settlers are subjected under the present arrangements is the presence in the woods of imposters who pretend that they gave authority to look after timber. It is not an unusual thing for several sharp men who have discovered a good grove to appoint an inspector in their own private interests who will keep intruders at a distance until his friends have secured the best of the trees. Very often these fraudently appointed officers make simple and unsuspecting men leave logs which they have cut, or unloaded their sleighs of timber which is quickly appropriated by others who claim that they have bought it from the imposter. The insolent imposters even go further, and sell or offer to sell permits, and put the money in their own pockets.

CONSERVING OUR FORESTS.

THE fact that Mr. R. W. Phipps, as representing officially the Ontario Government, is visiting the Ottawa valley with the view of acquiring information as to what is necessary for the preservation and reproduction of the forests of that district, is a fact of great importance to the country and especially to many of our readers. It is not surprising to learn that many prominent lumbermen of the Dominion Capital have approved warmly of his aims, and have promised him all the co-operation in their power. We have been aware that many of our lumbermen have been in favor of a more economical development of our forest wealth, and have even deplored that the present system of official management, and the little protection given to their property, almost forces upon them the destruction of what should afford a continuous supply for furture generations.

There seems now to be a dawn of better things. General attention has been called to the subject, to the wasteful system in vogue in Canada, and to the better example set us by the scientific forestry of other countries. We should take this warning and act upon it, before it is too late.

REVIEWS.

FORESTRY OF NORTHERN RUSSIA.—We have received another of the interesting series of works on forestry written by the Rev. Dr. J. C. Brown, and published by Messrs. Oliver & Boyd, Edinburgh. The subject of this volume is the Forestry of Northern Russia, and it is treated with all the thoroughness of our author. It is perhaps the most interesting of the series to Canadian readers, because of the striking similarity between the lumbering operations of the two countries. In reading some of the descriptions one may well fancy oneself as being on one of the rivers of Ontario. This brings out all the more clearly one important difference. We are accustomed to regard the Russians as not far advanced in civilization, and therefore it is the more surprising to find that they are far more scientific in their forest management than we are. Though their forests are even more extensive than our own, they have seen the folly of living upon their woodland capital, and are now treasuring it, so as to perpetuate the supply. Felling is so conducted as not to imply the virtual destruction of the forest, but to secure a perpetual succession of timber. This is the case not only in the enormous Government forests, but in those of private owners, and as we learn, in some instances, even in the communal forests. Surely what the half-civilized Russian can do is not impracticable for Canadians. One very interesting chapter deals with the profuse fossil flora of northern regions, showing what a great change there has been in the temperature of the globe. The information as to the navigation of the White Sea, is also timely, while we are investigating the capabilities of our own Hudson Bay.

FIRE AT DUBUQUE.

A fire broke out in the Dubuque Lumber Company's yard, at Dubuque, Iowa, September 3, at 4 o'clock in the afternoon. A high southwest wind was prevailing, which made it impossible to check the flames until they had swept over a space equal to four blocks. The amount of lumber burned was from 5,500,000 to 6,000,000 feet. Most of it belonged to C. W. Robison, who has lately run the yard and mill of the Dubuque Lumber Company under a lease. A small portion of the lumber belonged to the Dubuque Lumber Company. Robison's loss was estimated at from $65,000 to $80,000, which was fully covered by insurance. There was considerable loss in the burning of tramways, elevated roads, bridges and shops, which was suffered by the company owning the plant. The total loss at the date of the fire was placed at $105,000, nearly the whole amount being covered by insurance. During the excitement Mr. M. H. Moore, of the Dubuque Lumber Company, was thrown from the buggy, and received a severe cut on the head. Mr. Robison was also prostrated by the heat, and had to be conveyed to his home.—*Northwestern Lumberman.*

OUR FUEL SUPPLY.

As every one, be he rich or poor, has a direct pecuniary interest in any project calculated to increase the supply and lessen the cost of fuel, our readers will be glad to learn that Mr. Geo. Hilliard has been experimenting in this direction during the past season and that his efforts promise to be crowned with entire success. As the reader is aware, there still exists to the north of us a considerable supply of good hardwood, which would be invaluable to us could it only be transported to our doors at a moderate cost. One or two attempts have already been made to float it down in the same manner as sawlogs, but they were not attended with any great success, chiefly owing to the loss sustained by lockages, and the expense attending its removal from the water. Believing that these difficulties could be largely overcome, Mr. Hilliard had a considerable quantity of ordinary cordwood taken out last winter and delivered on the shores of Stony Lake, where it was allowed to remain drying until about six weeks ago. He then had it placed upon rafts or cribs for transport to Lakefield, from whence it was proposed to "run" it down the river loose. Owing, however, to the work now going on, on the Young's Point and Lakefield dams, the present lot had to be driven loose from the former point, but, although this materially enhanced the chances of loss, we understand that the percentage actually lost will not be serious. The other point to which Mr. Hilliard directed his attention was the devising of some cheap and expeditious means of taking the wood immediately on its arrival out of the water and placing it where it could be piled. To this end he determined to build a floating elevator which could be moved along the river bank as it became filled with wood. This was done by placing a portable steam engine on a raft and attaching thereto, to be driven by it, an elevator which takes the wood out of the water, carries it to a considerable height and then drops it into an inclined spout, whose bottom is a series of rollers, which, aided by the wood's own weight, conveys it to the shore and drops it where it is desired to pile it. From the success which has attended this year's operation, notwithstanding the untoward circumstances already mentioned, there can be little doubt that Mr. Hilliard will be able to make this method of increasing our wood supply a complete success, and materially benefit both himself and every householder in Peterborough.

OTTAWA LUMBER TRADE.

The Boston *Herald* of August 27th contained a telegram from Ottawa calculated to do great mischief to our staple industry—the lumber trade. The despatch stated that "there will undoubtedly be a number of heavy failures in this line before spring. Over 150,000,000 feet of lumber is held on piling grounds here, there being no demand for it in the United States." The despatch also asserted that "48 American barges are here with nothing to do;" and that "the cut this year will fall 40 per cent off that of last year." Of course statements of so serious a nature as these had an effect in some quarters and tended towards depressing business. Having made careful enquiry of the leading lumbermen in this city we are in a position to give the statement an unqualified contradiction. There are no indications of failure probable or prospective. In all the higher grades of lumber the trade is as good as this time last year. In coarser grades there is a little slackness, for which our lumbermen have made the usual concessions. As for stock on hand, the amount is not more than has been usual for several years past at this season of the year. Altogether we are assured the trade, while not so brisk as in former seasons, is highly satisfactory and perfectly sound. We would request the *Herald* correspondent to note these facts and correct as far as he may the erronous and injurious impression he has created on the other side of the line.—*Ottawa Sun.*

RAFTS ARRIVED.

The Quebec *Chronicle* has the following list of rafts arrived:

Aug. 22.—Cockburn's, waney pine and ash, Sharples' (Sillery).

Aug. 25.—D. D. Calvin & Co., oak and pine, sundry coves.

Wm. Simpson, birch, sundry places.

Aug. 26.—B. Caldwell & Sons, white and red pine, St. Lawrence Docks.

Edwin Jackson, pine deals, Commissioners' Wharf.

Sept. 4.—A. D. Ritchie & Co., deals, etc., Three Rivers.

M. O'Shaughnesney, deals, &c., Nicolet.

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, Sept. 2, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., Washington, D. C.:—

304,109.—Broom handle—T. P. Watkins, New Bedford, Mass.

304,364.—Flooring, wainscoting, &c.—H. C. Tunis, Baltimore, Md.

304,396.—Match split machine—M. Arnold & J. W. Wimmer, San Francisco, Cal.

304,389.—Plane knives, gage for setting—D. Willey & J. B. Thurston, Concord, N. H.

304,390.—Saw handle—J. D. Abbott, Reading, Mich.

304,631.—Saw jointer—J. Eutsler, Wallace, Cal.

304,380.—Saw sharpening device—D. Willey, Concord, N. H.

304,478.—Saws, device for thinning the backs of band—W. H. Townsend, Grand Rapids, Mich.

304,469.—Shingle machine—C. A. Tarragon, Portland, Oregon.

304,409.—Veneering wood, &c.—G. O. Boynton, Boston, Mass.

ST. CATHERINES SAW WORKS!



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MANUFACTURERS OF EVERY DESCRIPTION OF

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APPLE TREE BORER.

In answer to a correspondent respecting tree borers, the Albany *Cultivator* states as follows: The apple tree borer, known as the round headed borer, in its perfect state is a beetle three-fourths of an inch long, with two broad whitish stripes running the whole length of its back, with rather long and curved horn-like antennœe. This beetle lays its eggs in the bark of the tree near the ground early in summer and on till midsummer. These soon hatch, and the young larvæ begin to gnaw their way inward, cutting gradually into the solid wood. They are about three years in reaching maturity, when they come out in the form of the beetle already described. Their presence in the tree may be readily detected by the fine sawdust-like castings from the holes. They are easily killed by clearing away the openings of the holes with the point of a knife, and then punching them with a flexible wire or small twig. We have never found anything better than a small flexible twig from which the bark has been stripped to make it small enough to enter the holes. The operater knows when he reaches them by the peculiar touch. It is better to examine the trees often enough to find the larvæ when they are young, and before they have penetrated far into the solid wood. A partial remedy for preventing the laying of the eggs, is coating the bark from the ground well up with soft soap, or soap made as soft as thick paint, with washing soda and water. If applied in fair weather, it becomes dry and will not soon wash off. It may be applied two or three times from the first to the end of June. This insect attacks the peer, quince, mountain ash, and thorn. The *flat headed borer* is half an inch long, more or less, of a shining greenish-black color. It is very common in the Western and Southwestern States, and is also found far north. It attacks the trunk of the tree from the ground up to the limbs, and lays its eggs at the south late in May, and in Canada in June and July. The eggs soon hatch, and the worms bore through the bark into the sapwood. It is much shorter lived than the round headed borer. Sickly trees are more liable to its attacks than strong healthy ones. The larvæ are easily found by using the knife, and are destroyed; and the eggs may be mostly excluded with the soap and soda already mentioned. This insect attacks the oak, soft maple, and several other trees.

GREAT FIRE AT CLEVELAND.

CLEVELAND, Ohio, Sept. 8.—A fire that occurred on the flats last night was brought under control early this morning. Sixty-five acres are in ashes. Every vestige of property between Cuyahoga River, the railroad tracks, and Scranton avenue has been destroyed. Travel over the New York, Pensylvania and Ohio, Cleveland, Columbus, Cincinatti and Indianapolis, and Lake Shore and Michigan Southern roads has been delayed. Large sections of track has been destroyed. The origin of the fire is still a mystery. The chief of the fire department being engaged on the south side of the fire, in which direction the flames were spreading rapidly, did not realize the extent of the danger, and there was not a single engine on the north side to check the possible course of the flames. When the fire jumped the river it was an extremely critical point. If a strong breeze from the south had been blowing the belt of flames, a quarter of a mile long, must have inevitably been swept into a thickly built portion of the city along Michigan and Champlain streets. Then it would have been impossible to check the conflagration. Cleveland has never had such a narrow escape from general destruction. A large number of firemen were severely, though not dangerously, burned. An unknown man was carried down with a falling roof and perished. Some of the losses are estimated as follows:—Woods, Perry & Co., $700,000; Variety Iron Works, $50,000; Eynon & Son, $10,000; House & Davidson, $60,000; G. C. Stanley, $1,500; Sherwin, William & Co,, $2,000; A. Teaboult, $20,005; Hubbell & Westover, $25,000; railroad companies, $5,000; Potter, Birdsall & Co., $150 000; King & Co., $100,000; other small losses, $20,000. The insurance authorities say that the loss will not exceed one and a half millions; insurance, $400,000.

UNDERLINING ROOFS.

The new method of underlining the roofs of houses with flooring, says the *Timber Trades Journal*, is a first-class idea, whoever originated it, and the boards laid diagonally, when covered with slates, form a roof compact and weathertight that surpasses the ordinary open way of fixing the slates to the laths.

There seems no earthly reason why the walls of houses should not be lined, in a similar manner, especially partition walls, with matchboards, and then covered with non-combustible paper, etc., in lieu of the still usual style of lath and plaster, which we look upon as by no means the best method of making interior walls. Of course there is the difficulty surrounding the employment of wood, especially thin stuff like flooring boards, of getting a perfectly flat hard surface, impervious to atmospheric influences. Plaster, though a very clumsy contrivance, yet, when finished, certainly meets the objection that applies for the use of wood for walls. With the latter so unusually cheap there is no fear but that it will be turned to account somehow, and when once the fashion leads the demand will soon spring up for suitable stuff to meet the new employment found for it.

AMERICAN WOODS.

There are said to be thirty-six varieties of oak in the United States, thirty-four of pine, nine of fir, five of spruce, four of hemlock, twelve of ash, three of hickory, eighteen of willow, three of cherry, nine of poplar, four of maple, two of persimmon and three of cedar. The New York Museum of Natural History is to have a complete collection of the native woods of the entire country. The logs are being prepared for that purpose. They will be for the most part five feet long, a section of half the thickness of the log at one end being removed. In this way both the longitudinal and transverse grainings are shown. There is also a diagonal cut on the section, which displays the graining also. The remainder of the log remains in its natural condition with the bark attached.

HORRIBLE MURDER.

The *Globe* of Sept. 11 says:—Newe has reached this city of a horrible murder which curred on the 26th of July last at Jackfish B y, on the north shore of Lake Superior. The victim was a navvy working on Mr. Reid's contract of the Canadian Pacific Railway, and the murderer is believed to be another navvy, who only worked a day or two a week to pay for his board. John Collings, the victim, an Englishman, was a good, steady labourer who saved his money. It appears that on the 26th of July last, Collings was last seen at the camp in company with a young man named John Ryan. The men were missed and a short time afterwards Ryan returned. He was asked where his companion had gone, when Ryan replied that he had quit the job and taken the steamer for Toronto. Of course this story was believed, and a short time afterwards Ryan left the camp and took the steamer Spartan down the lake. Colling's companions did not suspect that anything was wrong till about six weeks aiterward, when some men belonging to the camp who went out huckleberrying, discovered a body in the bush in such an advanced state of decomposition that it was almost beyond recognition. The clothing which the man wore, however, was the chief means of identification. The remains were then found to be that of Collings, who had gone away from the camp with Ryan on the 26th of July. His skull was smashed in a most horrible manner, the pockets were rifled, and the waistband of the trousers worn by the deceased in which he had sewn his money, had been cut open and everything taken. Beside the body lay a shoemaker's hammer. with the awful deed had been accompolished. Ryan was at once suspected of being the murderer, and the people remembered that he was generally without money and that the next day after he had been seen with the murdered man he purchased a suit of clothes and appeared to be possessor of plenty of cash. The hammer was also identified as belonging to Ryan, who had been in the habit of putting heavy nails in the soles of the boots for the men to make them wear longer while working in the rock cutting. Ryan came to Toronto after leaving Jackfish Bay and cashed a check, forging the dead man's name, for $42. This was another link in the evidence. The murdered man was known to have had in his possession when last seen with John Ryan some $480, which had been taken from his clothing after he had been so brutally murdered. The whereabouts of the man suspected of the murder are unknown, but is is believed that he has respectable relatives living in Montreal.

Schooner Sunk.

BUFFALO, Sept. 8.—Cosby & Gunning, of this city, have received the following message from Peninsula Harbour:—"Schr. W.R. Taylor sunk in fourteen feet water. Loaded with steel rails for the Canadian Pacific Railway at Heron Bay, Lake Superior. Please take notice, I abandon her to underwriters. Want tug and two good steam pumps. Will meet tug at the Sault or Detroit, etc., etc. Signed, H. Buckley." The Taylor had evidently reached her destination, as other vessels from this port have unloaded at Herons Bay. She is 322 tons burden, was built in 1877, and registered in Picton.

WISE WORDS.

The following rules might be adopted by every saw mill in the land, and if rigidly enforced would save to each mill owners hundreds of dollars annually:

The sawyer can waste a good deal of lumber by slabbing too heavy. After being at the expense of getting the logs in the mill all the lumber should be made that can be got out of them.

The edger's is a very important place. He should know the different grades of lumber, and be quick to determine when he picks up a board just how to edge it to get the most out of it.

The trimmer should use judgment in trimming. A 12-foot board, well-butted, is of more value than 14-foot board with bad ends.

The yard boss should be careful in grading his lumber, stacking each grade separate. Lumber should be handled so as not to split or injure it. *Exchange.*

A Strange Story.

DETROIT, Sept 8.-Three ourageous Americans went hunting yesterday in the marsh, at the mouth of the little Basset channel Detroit river, Canadian Customs revenue officer, on the look out, rowed along side their boat and grabbed one of the guns belonging to the party, on the ground that it was unlawful for Americans to bring guns into Canada. One of the men hit the official over the head with an oar, which made him drop the gun and get out of reach, when another of the party deliberately aimed at him with his gun and gave him a charge of small shot to remember them by. Then they concluded the place would soon become to sultry to hold them, and so they made a bee line for Detroit.

Prompt Payment is Practical Praise?

An exchange tells its readers how "to mind your P's" in the following paragraph: Persons who patronize papers should pay promptly, for the pecuniary prospects of the press have a peculiar power in pushing foward puplic prosperity. If the printer is paid promptly, and his pocket book kept plethoric by prompt paying patrons, he puts his pen to paper in peace, his paragraphs of passing events have more pleasing colors, and the perusal of his paper is a pleasure to the people. Paste this piece of proverbial philosophy in some place where all parties can perceive.

The Hon. Alex. Mackenzie, after returning to Winnipeg from a trip over the C. P. railway was interviewed by a *Times* reporter, and the following extract is from the interview:—"He was surprised to find in this country such corps he had seen to-day, after all the tales of excessive drought and summer frosts and snows in the Territory which had been told in Ontario. He could not conscientiously declare that he had not seen so good a field of wheat in Ontario this year as the one he seen on Mr. Robitaille's farm, and the oats he had never seen excelled in his life. Everything he saw betokened greatness."

THE largest wooden vessel ever built says the *Lumberman's Gazette* was lauched at Capt. Davidson's shipyard, West Bay City, last week. She is a steambarge named Australasia, 305 feet long. Capt. Davidson will at once build another barge as consort to the one just launched.

A SUCCESSFUL LUMBERMAN.

General Russell A. Alger, the nominee of the Republican party for Governor of Michigan, is prominently connected with the lumber interests of his state. At Detroit he stands at the head of Alger, Smith & Co.; he is connected with the firm of R. K. Hawley & Co., at Cleveland, and is president of the Manistique Lumber Company, with mill at Manistique, Mich. He was born in Lafayette, Medina county Ohio, in 1836, and is now 48 years of age. Being left an orphan at 11 years of age, he worked on a farm to support a younger brother and sister. He acquired a very good English education during his youth, and began the study of law at Akron, Ohio, in 1857, entering the office of Otis & Coffinbury, at Cleveland, in 1859, where he continued his studies. Failing health compelled him to abandon study, and he engaged in the lumber business at Grand Rapids, Mich. When the war broke out he enlisted in the Second regiment, Michigan cavalry, and as a trooper participated in some of the hardest fought battles of the war. At the close of hostilities he was breveted brigadier general and major general for meritorious service in the field. He settled at Detroit in 1865, and embarked in the lumber business and dealing in pine lands. He was a member of the well-known firm of Moore & Alger until its dissolution, when he became the head of the firm of R. A. Alger & Co., said to be the most extensive pine operators in Michigan. When R. A. Alger & Co. was incorporated as a company the General was elected its president. He is also president of the Manistique Lumber Company, as has been stated. General Alger is president of the Detroit, Bay City & Alpena Railroad Company, and stockholder and director of the Detroit National Bank, the Peninsular Car Company, of Detroit, and several other corporations. General Alger is a slendor build, his square shoulders and erect carriage giving the impression of greater weight than the scales actually indicate. He is firm but pleasant in his manners, and quite fastidious in his dress. He is a hard and persistent worker. He has a wife and is the father of six children. The family will soon occupy a fine new residence on Fort street, Detroit.—*Northwestern Lumberman.*

PINE LAND SALE.

The Saginaw *Courier*, of August 23, states: "It will be recollected by Saginaw people who take note of pine transactions, that in March last, the undivided one-half interest of the late R. H. Weidemann of this city, to a tract of some 10,000 or more acres of pine timber lands in Ogemaw county, was sold at auction at West Branch, and was bid in by Nelson Holland, of Buffalo, the consideration being $108,150. It is estimated that the tract will produce about 40,000,000 feet of timber. There was considerable competition at the time for the tract, Mr. George N. Hauptman, who had the other undivided half interest, being anxious to secure control of the entire tract, but was outbid by Mr. Holland. It is learned that negotiations have been pending for some time and have resulted in the transfer by Mr. Holland of the interest in the above lands held by him to Mr. Hauptman, at a consideration of about $115,000.

DON'T BURN THE WOODS.

The cool, damp summer makes a warm, dry fall probable, and this of course increases the the likelihood of forest fires. Few people realize how great and far-reaching is the damage these do. The statistics have never until recently been collected, so that the terrible extent of loss from this cause could be ascertained. The amount of valuable property thus destroyed is found to be enormous, besides the great indirect loss by killing young sprouts and seeds, and in some cases where a wind-fall is burned the heat is so great that the vegetable substance in the soil itself is burned. Of course, it is a long time before good timber, or anything else of value, can be raised there again. Where this occurs on a steep granite mountain side, ashes, soil and all are apt to be washed down into the streams by the next heavy rain, and it will be centuries before trees, "the nurseries of springs," will again clothe such a slope. Meantime, water runs off so quickly that the violence of freshets is greatly increased. A great part of the fires set in the woods are the result of sheer carelessness. Camps are left without making sure that no piece of punky wood is left with a spark nestling in it. Brush lots bordering woods are burned to clear them without proper precautions. Many of the terrible fires of last spring were caused in that way. Locomotives go dashing along carrying no efficient spark arrestors, and a great many of the worst conflagrations result. We need stricter laws and more severe penalties against either wilful or careless setting of such fires. Teachers should do all they can to caution boys about it, and it would no doubt in many districts be good economy to employ a special patrol to detect fires as soon as possible, and rally help, and also to discover those responsible for their origin. If we guard the interests of our posterity we must take care of the timber, for the coming generations will be the chief sufferers if we neglect to do it.—*London Free Press.*

GATHERING THE FRUITS.

The Chicago *Northwestern Lumbernan* of August 30th tenders the following counsel to the lumber dealers on the "bearing" of prices:

"It is to be hoped that the lumber jobbers—wholesale dealers—who, during the boom, were inclined to be bears on the market, now have their fill of that kind of business. It must be conceded that the buyer of lumber or any other commodity, has the right to procure his supplies at the cheapest possible rate commensurate with fair dealing. But when he resorts to such a representation of the trade conditions as to destroy the value of the very property in which he is handling, he is treating his comrades in business unfairly, as well as demoralizing the value of his merchandise. It is impossible for a lumber merchant of this city to go upon the market and proclaim that the trade is going to the dogs, prices are dropping every day, and everything connected with the lumber business is demoralized, without injuring his own property as well as bearing down the value of that which he wishes to buy. The lumber merchant of this city cannot pursue the policy of cutting prices in the yards without the effect of such a course demoralizing values throughout the entire lumber business with which he is connected, from the stump to the country retail yard. Neither can he bear at the market or bull in the yards. He can deceive but few by the false proclamation of conditions, if he had such a desire. Lumber dealers, and consumers as well, are nowadays so well informed that no sharp practice with price lists can fool many. The mass of buyers know very nearly what lumber is worth at the mills, on the market or in the yards. For this reason it is folly for anybody to plume himself on being a bull or bear in the lumber trade. Lumber is a commodity of substance and usefulness. It costs money to produce it. The handlers of it have a right to their profit. The manufacturers have a right to insist on the cost of lumber as a basis of values. The merchant who attempts to unsettle this basis for the sake of making a great strike in purchasing does not fully count the cost if he be successful. Lumber is not like grain, or stocks, or cotton, on which margins are put up to cuffed about by speculators. Lumber is a slow commodity, and of a bilious temperment. When the prices of it fall it is hard to raise them. If lumber had a mercurial margin that could be speculated on as "futures," it would be different. But lumber is bought and sold at a real value. Any depression of prices at the mills or on the market must take effect on yard stock. The men in the trade who began to pound lumber in 1882, and kept it up until last spring, can now view with complacency or otherwise the result of their effort. Some of them are viewing it otherwise than complacently. The demoralization is greater than they counted on. Values are too utterly unsettled to suit them. The unsteadines and lowness of prices have effected trade among country dealers. Retail yard men hesitate about buying on account of prices. This could not be if values at the mills and on the market were hard and unyielding. When a slump occurs on the market for bulk stocks, everybody handling assorted lumber is at sea. Whatever the wholesale merchants may say about the decline of lumber values, with iron and everything else, being inevitably as a reaction from the boom, they cannot deny that they jumped on, and did what they could with the weight of their influence, to accelerate the fall. What they now have in the shape of demoralization they hoped for and worked for. They should be satisfied.

In making the foregoing remarks about the past and present attitude of the bear section of the lumber trade it should not be understood that we mean to convey the impression that there has not been for the last three years a real tendency downward of lumber values, or that all of the present demoralization has been caused by bearish efforts to depress prices. Lumber would inevitably declined under the influences that have prevailed in finance, manufacturing and general business, and under the influence of overproduction. But as regards the distributive trade, the bad effect of the decline was anticipated. Seeing the shrinkage afar off, the dealers in 1882 began to cut prices in order to buy cheaper at the mills and on the market. They could have maintained yard prices certainly a year and a half longer than they did, and when the decline came it would have begun at the right end; namely, with the producer. That would have been natural, and have saved the trade the loss of cutting their own prices long before the decline of bulk stocks took place. It is hoped that the experience of the present trying times will cause the merchants to adopt a new course for the future. While they have a right, and should resist an undue tendency to high prices on the part of first holders, there is no reason why they should be continually cutting the vitals out of their own profits by demoralizing yard prices. The competition for trade is always alleged as the reason for cutting prices. Some concessions have to be made sometimes for the sake of meeting prices from rival points, but the trade of this city should be so well organized, and have such an understanding with the manufacturers and the cargo market, that some consistency of values, as between the supply and the trade, should always be maintained."

THE INTERNATIONAL EXHITION OF 1885.

The third great International Exhibition to be held at South Kensington next year will be devoted to inventions. The list of groups under which the classification is arranged is as follows:—

DIVISION I.—Apparatus, appliances, processes, and products invented or brought into use since 1862.

1.—Agriculture, horticulture, and arboriculture.
2.—Mining and metallurgy.
3.—Engineering construction and architecture.
4.—Prime movers, and means of distributing their power.
5.—Railway plant.
6.—Common road carriages, &c.
7.—Naval architecture.
8.—Aeronautics.
9.—Manufacture of textile fabrics.
10.—Machine tools and machinery.
11.—Hydraulic machines, presses, machines for raising heavy weights, weighing, &c.
12.—Elements of machines.
13.—Electricity.
14.—Apparatus, processes, and appliances connected with applied chemistry and physics.
15.—Gas and other illuminants.
16.—Fuel, furnaces, &c.
17.—Food, cookery, and stimulants.
18.—Clothing.
19.—Jewellery.
20.—Leather, &c.
21.—Indiarubber and gutta-percha, &c.
22.—Furniture and accessories—fancy goods.
23.—Pottery and glass.
24.—Cutlery, ironmongery, &c.
25.—Firearms: military weapons and equipment; explosives.
26.—Paper, printing, bookbinding, stationery, &c.
27.—Clocks, watches and other timekeepers.
28.—Philosophical instruments and apparatus.
29.—Photography.
30.—Educational apparatus.
31.—Toys, sports, &c.

DIVISION II.

32.—Instruments and appliances constructed or in use since 1800.
33.—Music engraving and printing.
33.—Historic collections.

These groups are subdivided into 180 classes. The following are the classes referring more particularly to building.

Materials used in building.—Bricks and tiles, machines for making them; concrete, artificial stone, cement, materials and appliances used in their productiou; asphalt; roofing felt and other roofing materials; columns, girders, and other applications of metal in building; applications of terra-cotta to buildings; preservative and fire-resisting materials, paints, &c., for application to stone, wood, iron, &c.; methods of applying the same.

Building Construction.—Models and plans showing methods of construction; non-combustible constructions; labor-saving and other machines and appliances used in building, scaffolds, elevators; fittings and appliances used in building, shutters, blinds, lifts, bells, speaking tubes, &c.

Heating, Ventilation, House-drainage, &c.—Sanitary appliances; ventilators; cowls for chimneys, chimney-sweeping apparatus; apparatus for heating by steam, water, air, &c.; means of cooling air.

Wood-working Machinery.—Lathes (including lathes for ornamental turning), machines for sawing, planing, moulding, mortising carving, veneering, cask-making, wheel-making, cork-cutting, &c.

The three former are embraced by Group III., and the latter by Group X.

Applications for space will be received not later than September 15th from home exhibitors, but applications from foreign countries and the colonies will be received up to the 1st of November.

A GREAT BRIDGE.

In the engineering section of the British Science Association there was read a very able and interesting paper, illustrated by diagrams, on the great bridge to be built across the Firth of Forth, in Scotland. Mr. Benjamin Baker, the author, referred to the late Sir William Siemens as one who took a great interest in this bridge. He mentioned that five tenders were submitted for the work, the amount varying from £1,487,000 sterling to £2,301,760, and that the contract was finally let to Messrs. Tancred, Arrol & Co., on the 21st of December, 1882, for £1,600,000, which was within £5,000 of the estimated cost of the work as prepared by Mr. Fowler and Mr. Baker himself for parliamentary purposes. The total length of the viaduct included in this contract is about one and a half miles, and there are two spans of 1,700 feet each, Including piers there is thus almost one mile of main spans, and half a mile of viaduct approach. The clear headway under the centre of the bridge is 150 feet above high water, and the highest part of the bridge is 361 feet above the same. Each of these main piers consists of a group of four cylindrical masonry and concrete piers, forty-nine feet in diameter at the top and from sixty feet to seventy feet at the bottom. The deepest pier is about seventy feet below low water, and the rise of tide is eighteen feet at ordinary springs. In the piers there are about 120,000 cubic yards of masonry, and in the superstructure about 45,000 tons of steel. Operations were begun in January, 1883, so the works have now been some twenty months in progress, and about £170,000 have been expended in plan and temporary works and £200,000 in the permanent works of the bridge.

A TELEGRAM from Halifax, N. S., stated that the saw mills of F. Elliskausen and F. W. Beckman, on the St. Croix river, were burned August 26th, together with 200,000 feet of lumber.

McBURNEY & Co.'s saw mill at Gravenhurst, Ont., with a large quantity of lumber was burned August 24th. Loss, $50,000; insurance, $35,000.

A PREHENSIBLE TREE.

Lieut. Houghton, who has recently visited New Guinea and several other groups of islands in the Pacific, reports the existence of a prehensible tree. It appears to be a species of ficus, allied to the well-known banyan tree, which throws out from its branches air roots, that eventually reach the ground and take root there, and their turn become new stems, which perform the same function; so that a single tree will eventually extend so far as to form a complete forest, in which the stems are united by the branches to each other. The prehensible tree in question similarly throws out from its branches long, flexible tendrils, which, touching the ground, do not take root there, but twine around any article that may lie within their reach. After a time these quasi-branches contract, so that they fail to reach the ground; but the finger-like processes continue to closely grip the article around which they have twined themselves, and which are consequently suspended in mid-air. In this way articles of a considerable weight may be picked up from the ground and held in suspension.—*Farmer's Gazette.*

BEAUMONT AND ORANGE SHIPMENTS.

From the Beaumont *Enterprise* it is learned that during the year, from August 1, 1883, to August 1, 1884, there were shipped from that point over the Texas, New Orleans & Louisiana railway, 5,061 car loads of lumber and 351 car loads of shingles, a total of 5,412. During the same period Orange shipped 3,078 car loads of lumber and 729 of shingles, a total of 3,807. Lake Charles, during the same time, shipped over the same road 2,431 car loads of lumber and 68 of shingles, a total 2,499. Beaumont plumes herself on having shipped only 894 cars less than Orange and Lake Charles combined. The shipments from the Sabine & East Texas railroad, that feeds the Texas, New Orleans & Louisiana at Beaumont, were 4,507 car loads of lumber, and 101 of shingles. These figures give a grand total of lumber shipments for the year included in the above named dates of 14,957 car loads. Allowing 9,000 feet to the car, we have a total shipment of 130,613,000 from the Lake Charles and Sabine long leaf pine districts.

Destruction of Timber.

Careful investigation seems to warrant the conclusion that, although there is much wasteful cutting of timber, fires cause much more destruction in the forests than the axe. Every year enormous quantities of standing timber are thus consumed, as well as a vast amount of manufactured lumber, piled at the mills on the confines of the wooded districts. But this is not all. The small trees, spruts, seeds, and even the vegetable substance in the soil itself, are often so thoroughly destroyed that growth of any sort is delayed for many years. The The matter deserves attention, for the fact is patent to all that the country is fast being denuded of timber, while scarcely any effort is being made to plant and cultivate a second supply.—*Toronto Mail.*

Water in Wood.

Of green wood one-third to one-half or more of its weight is water, partly depending upon the time of cutting. All kinds of wood cut in January in the Northern or Western States contain from 15 to 25 per cent. less water than they do in spring. Experiments have shown that 100 pounds of ash wood cut in January contain 29 pounds of water, while the same amount cut in April contained 38 pounds of water; 100 pounds of sycamore cut in January contained 33 pounds of water, and 40 cut in April. White pine cut in January contained 52 pounds: cut in April 61 pounds of water.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain and cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup for children teething. Its value is incalculable it will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it It cures dysentery and diarrhoea regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system, Mrs Winslow's Soothing Syrup for children teething is pleasant to the taste, and is the prescription of one of the oldest and best female nurses and physicians in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

Chips.

THE Montreal export of lumber to South America is this season 2,000,000 feet in excess of last.

A LARGE steam saw-mill is being erected by McDonald & McKenzie at the east end of Kicking Horse Pass.

THE Rathbun Company of Deseronto are busily engaged in erecting large dry kilns. They are supposed to dry 25,000 feet per day.

THERE has been a new industry started in Bolton Centre, Quebec. James Sherman has put in machinery, and is turning out wooden bowls. As he is an expert at the business, success will be likely to crown his efforts.

IT is believed that the Muskegon river will be cleared this fall. At least one-half of the logs have been sawed and are now on the market. Lumber piled 100,000,000; logs in mill and store booms, 50,000,000; logs in river, 250,000,000.—*Lumberman's Gazette.*

MESSRS. FULLER & HILL, of Bolton Centre, Que., have manufactured over twenty thousand butter tubs this season. They have sold over eighteen thousand, fifteen thousand having been shipped to Montreal. They have stock enough on hand for sixty thousand more.—*Cowansville Observer.*

MR. GEO. E. LUNDY is erecting a saw mill at Lilly Bay, Lake Manitoba, and expects to have it in operation in a couple of weeks. The mill is located in the heart of a good timber region, and Mr. Lundy has about 100,000 feet of timber ready to convert into lumber. This will prove a great boom to the settlers in that region. Mr. Lundy also expects to establish a grist mill in connection with his saw mill.—*Winnipeg Free Press.*

ROCKLAND now boasts one of the finest mills in the Ottawa Valley, the same having during the past winter been entirely remodeled and supplied with the latest and most improved machinery. The enterprising proprietors, Messrs. W. C. Edwards & Co., with the able superintendence of J. N. Kendall, their foreman, have, regardless of expense, placed their mill high in the list of first-class lumber mills, and second to none in the Dominion for mechanical convenience.—*Mechanical and Milling News.*

THE export of lumber direct from Montreal to South America appears to be looking up. The *Gazette* says:—Messrs. Anderson, McKenzie & Co. have chartered the barque Lorraine, 371 tons, to load a cargo of lumber at Montreal for Bahia Blanca at $15 1,000 feet. This is the first charter effected from Montreal to that port, and we trust it will prove the forerunner of a material addition to our export lumber trade. Lumber freights to South America are at $13 to $14, as to size and position of vessel.

THE *Lumberman's Gazette* says:—Forty thousand feet of logs are being transported daily by rail to Tawas. All the mills, both at Tawas and East Tawas, except the old Whittemore mill, are running now, and have all the logs they can cut, but for lack of piling room several of them have been compelled to shut down several times during the season. At Prescott's mill, Tawas City, large additions have recently been made to the dock, and it is not expected that further delay will occur there on account of lack of space for storage.

A POWERFUL engine and ten new flat cars passed up the Canadian Pacific Railway a few days ago, to be used on the new railway built by Mr. J. R. Booth, the well known lumberman of Ottawa, between lakes Nosbonsing and Nipissing. Mr. Booth's railway has just been finished. It is about six miles in length, and is to be used to convey logs and timber up the South River across a small isthmus into Lake Nosbonsiug. Heretofore timber made in the South River had to be brought a long distance around by the Georgian Bay and the great lakes. The timber after arriving at Lake Nosbonsing, will be navigated into and down the Mattawa River to the Ottawa. As there are a large number of firms operating in the Nosbonsing district, the new line, which starts from South East Bay, will be a great boom to the Ottawa River.—*Canadian Manufacturer.*

HENDERSON BROS.

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Building & Bridge Timber Sawn to Order.

Pine, Spruce and Hemlock Lumber by the Cargo.

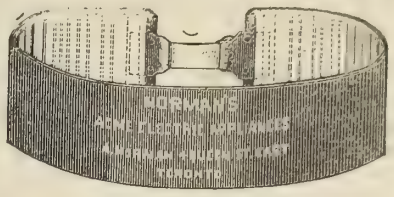
Steam Saw Mills, Box Factory and Yards.—342 to 390 William St., and 130 St. Constant St., Montreal. Steam Saw Mills, L'Assomption, P.Q.

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4 QUEEN STREET EAST, TORONTO.

NERVOUS DEBILITY, Rheumatism, Lame Back, Neuralgia, Paralysis and all Liver and Chest Complaints immediately relieved and permanently cured by using these BELTS, BANDS, AND INSOLES.

Circulars and Consultation FREE.

A FEW SIMPLE TESTIMONIALS THAT SPEAK FOR THEMSELVES.

OTTAWA, September 3rd, 1883.

A NORMAN, ESQ.—Dear Sir,—I have experienced considerable benefit from your appliances. I feel stronger and better every day.

Yours truly, R. E. HALIBURTON.

PETERBOROUGH, October 15, 1883

A. NORMAN.—Dear Sir,—Soon after I commenced to use your Electric Appliances, they opened my bowels, cured my cough and cold, relieved my head and considerably relieved my catarrh in consequence. The discharge from my head and chest are now easy, and I feel altogether better. My digestion has improved, my stomach less sour and windy, and I am less troubled with lascivious and vivid dreams. I had previously tried almost all the advertised patent medicines without deriving any good.

Yours truly, J. GREEN.

CURATIVE BATHS, Electric, Vapor, Sulphur and hot and cold Baths. Baths have been admitted in all ages by every school of medicine, to be one of the best means of curing ailments, maladies and diseases. The Electric Bath is the latest and best discovery in this line. Come and try them, at

4 Queen St. East Toronto.

L14-1y A. NORMAN, Proprietor.

MILITIA.

SEALED TENDERS, marked on the left hand corner of envelope "Tenders for Militia Clothing and General Store Supplies," and addressed to the Honorable the Minister of Militia and Defence, will be received up till noon of Monday, 11th August, 1884.

Printed forms of tenders, containing full particulars, may be obtained from the Department at Ottawa and at the following Militia Stores, where also sealed patterns of all articles may be seen, viz:—The offices of the Superintendent of Stores at London, Toronto, Kingston, Montreal, Quebec, and St. John, N. B.

Tenders not in relation with sealed patterns of the Department or accompanied by special patterns will not be received.

No tender will be received unless made on printed forms furnished by the Department.

The material of all articles will require to be of Canadian manufacture and Canadian workmanship.

Each tender must be accompanied by an accepted Canadian bank cheque, for an amount equal to ten per cent. of the total value of the articles tendered for, which will be forfeited if the party making the tender declines to sign the contract when called upon to do so, or if he fails to complete the service contracted for. If the tender be not accepted the cheque will be returned.

The Department will not be bound to accept the lowest or any tender.

C. EUG. PANET,

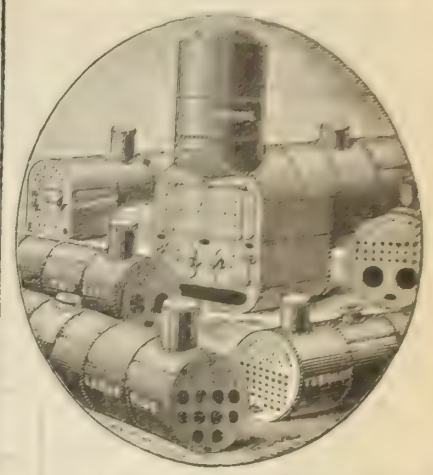
Deputy of the Minister of Militia and Defence

Ottawa 4th July, 1884.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainity, write for particulars to H. HALLETT & Co., Portland, Maine. 6md145-1y w

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SECOND-HAND MACHINERY Bought, Sold or taken in exchange for new work. REPAIRS PROMPTLY ATTENDED TO. All Boilers Tested by cold water pressure to 150 pounds to the square inch.

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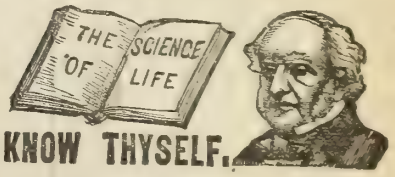
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Exhausted Vitality, Nervous and Physicial Debility, Premature Decline in Man, Errors of Youth, and the untold miseries resulting from indiscretion or excesses. A book for every man, young, middle-aged and old. It contains 125 perscriptions for all acute and chronic diseases, each one of which is invaluable. So found by the Author, whose experience for 23 years is such as Probably never before fell to the lot of any physician. 300 pages, bound in beautiful French muslin, embossed covers, full gilt, guaranteed to be a finer work in every sense—mechanical, literary and professional than any other work sold in this country for $2.50, or the money will be refunded in every instance. Price only $1.00 by mail, post-paid. Illustrative sample 6 cents. Send now. Gold medal awarded the author by the National Medical Association, to the officers of which he refers.

This book should be read by the young for instruction, and the afflicted for relief. It will benefit all. —*London Lancet.*

There is no member of society to whom this book will not be useful, whether youth, parent, guardian, instructor or clergyman.—*Argonaut.*

Address the Peabody Medical Institute, or Dr. W. H. Parker, No. 4 Bulfinch Street, Boston, Mass., who may be consulted on all diseases requiring skill and experience. Chronic and obstinate diseases that have baffled the skill of all other physicians a specialty. Such treated success fully without an instance of failure. HEAL THYSELF

Market Reports.

TORONTO.

From Our Own Correspondent.

SEPT. 9.—Since my last letter there has been a slight improvement as to the quantity of lumber shipped over our docks, during the last two weeks about 2,500,000 feet have passed from the cars over the rail of vessels, nearly all consigned to Oswego. A portion of said shipments going forward on joint account and a risk of a firm in Oswego and shipper, and most of the balance to fill direct purchases, or in other words to be sold on commission. This of itself is sufficient to show an unhealthy state of trade. In times not long past dealers from the American market came here hungry for lumber, it was then the rule for wholesale dealers to hunt up the mill men, many of whom treated the middlemen with a stand off kind of air, and often in curt tones said they had sold all they had to dispose of. The tables are now turned. The manufacturer comes here to look up purchasers taking in all the retail dealers in his route, which, by the way, is not exactly on the square, inasmuch as the middlemen are certainly the main stay of the millmen, and the latter are better acquainted with the standing and wants of the retailers, and the trade would be better and safer left entirely in their hands. Still, after all that may be said in this connection, it serves the wholesale dealers perfectly right, they will persist in dabbling in trade that legitimately belongs to the retail men, so that they are paid back in their own coin. This much, however, is certain, if each of the classes named would confine themselves strictly to their legitimate trade they would all come out at the end of the season with quite as many dollars in hand.

The exhibition which opens here this week will have the effect of making trade at the yards quiet for the next two weeks, which will, however, likely be followed by increased activity for the remainder of the season. Large sums of money will doubtless be left in our city and the result will be a free expenditure in various ways, in which the retail lumber trade will share in common with others. Prices remain much the same, and lath, the price of which ruled lower, shows signs of advancing, and will doubtless reach the old figure before the fall closes.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
Scantling and joist, up to 16 ft	13 50
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 00
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	20 00
" " " 32 ft	21 00
" " " 34 ft	22 50@22 50
" " " 36 ft	24 00
" " " 38 ft	27 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	24 00
" boards "	20 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 00
Three uppers, Am. inspection	35 00@40 00

B. M.

1½-inch flooring, dressed	30 00
1½ " " rough	16 00
1½ " " dressed	25 00
1½ " " undressed	15 00@15 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	2 90
Sawn Lath	2 75

WINNIPEG.

The *Commercial* of Sept. 2nd, says:—Trade in this line still continues fairly satisfactory to dealers. The demand from the city and country is much better than dealers had anticipated at this season of the year. The mills are running full time, and in some cases they have put on a night gang to enable owners to fill their orders promptly.

MONTREAL.

From Our Own Correspondent.

SEPT. 9.—Our exhibition is at present in full swing and lumber dealers are sanguine that after its close there will be a better demand for their goods, which since the date of our last has been very dull and present prices are with difficulty maintained, although holders are not very willing to yield in their demands. Stocks are still well assorted. We continue to quote as follows:—

Pine, 1st quality, ℔ M	$35 00@40 00
P ne, 2nd " ℔ M	22 00@24 00
Pine, shipping culls, ℔ M	14 00@16 00
Pine, 4th quality deals, ℔ M	10 00@12 00
Pine, mill culls, ℔ M	7 00@ 9 00
Spruce, ℔ M	10 00@13 00
Hemlock, ℔ M	9 00@10 00
Ash, run of log culls out, ℔ M	15 00@18 00
Bass, " " ℔ M	15 00@20 00
Oak, ℔ M	40 00@50 00
Walnut ℔ M	60 00 100 00
Cherry, ℔ M	60 00@80 00
Butternut, ℔ M	25 00@35 00
Birch, ℔ M	20 00@25 00
Hard Maple, ℔ M	25 00@30 00
Lath, ℔ M	1 75@ 2 00
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 50@ 0 00

SHIPPING

Has been fairly active during the past two weeks, and is likely to continue so during the rest of the season of open navigation. Freight, however, shows a slight decline being now $12.50 to $13.50, and rates to the United Kingdom are unchanged.

BOSTON.

The *Journal of Commerce* says:—General business is moving along quietly and moderately, with very little change to chronicle. White pine seems to hold its own in price. Spruce is rather slow and easy. Southern pine is dull and without improvement. Walnut and whitewood of the best quality find an improving market. Ash and oak sell slowly. Cherry has a moderate call in choice grades.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

CHICAGO.

AT THE DOCKS.

The *Northwestern Lumberman* of Sept. 6th says:—The fleet on the market from Thursday to Monday was fairly large, the wind having been favorable to bring the vessels in, The port list showed 178 arrivals during the seven days included by our record, a large proportion going on the market.

The prices of timbers and long and heavy joists range upward from $10 a thousand, quotations on this class of stock being more difficult than any other.

Within two or three weeks a number of cargoes of good lumber have been sold on the market, including a large proportion of thick selects and uppers. It is declared that this kind of lumber has sold considerably off from last year's prices. Such lumber is selling out of the yards $3 to $4 below last springs prices on some grades, and it is not surprising that the market shares in the general decline.

Shingles are a trifle more active, while there is some strength to prices. Generally stated there is a better feeling as regards shingles. During the season there has been a decrease of shingle receipts at this point, according to the report of the secretary of the Exchange, to the amount of 189,172,000.

Quotations are as follows:—

Piece stuff, green	$8 37½@ 8 50
Long timber, green	11 00@10 50
Coarse common	9 00@ 9 50
Boards and strips—No. 2 green	9 50@11 00
Boards and strips Medium, green	11 50@15 00
Boards No. 1, green	15 00@18 00
High grade	18 00@24 00
Shingles, standard	1 55@ 1 80
Shingles, Choice	1 80@ 1 90
Shingles, extra	1 90@ 2 20
Shingles, clear	2 80
Shingles, cedar	1 50@ 2 00
Lath	1 25@ 1 40

LAKE FREIGHTS.

Grand Haven by steam	$ 1 12½
" " " sail	1 25
Muskegon by steam	1 12½
" " sail	1 25
Whitehall	1 37½
Ludington	1 50
Manistee	1 62½
Menominee dry	1 50
" green	1 62½
Oconto	1 62½
Cheboygan	1 50
Alpena	1 75
Bay City	2 00
Tawas	0 00
Frankfort	1 62½

AT THE YARDS.

While the volume of shipment is holding the gain that was made about the middle of Aug., trade is not manifesting that life and vigor that was hoped for. Instead of continuing to increase, it is keeping an even, moderate tenor that does not indicate an extraordinary demand in the country. Judging from appearances in the district it is not certain that business is quite as good as it was a week or ten days ago. Inquiries are numerous, and there are signs of future trade. But those who have calculated on a rushing demand throughout the fall, because of the good crops, are likely to not fully realize on their calculation. There will be a demand for lumber, of course, and it will be large in the aggregate; but it will not be of that extraordinary character that piles up orders, renders cars scarce and stiffens prices. Dealers must make up their minds to be contented with a fairly good demand. If they have counted on a veritable uplifting wave of requirement as a means of buoying them over any sandbars, they must make other arrangements. It is a bad year in which to depend on booms. The only safe way is to figure on the minimum of things. Then if more favorable conditions arise, the yard man will be so much ahead.

One favorable feature can now be scored down as a fact. The crop is nearly assured. The late warm weather and the prospect of continuance almost absolutely settles the corn question.

Receiving lumber is not as active as it was earlier. Though all that is offered at the market docks is taken care of, receipts by lake have latterly fallen off somewhat, and the absorbing process is not as laborious as it was. Piece stuff is still bought with some avidity, the mill men having held back this kind of lumber to some extent, while prices are steady at the docks. The fact that dimension lumber at the market docks is helds with so much firmness, is taken with so much readiness by the yard dealers, and at the same time is slaughtered so unmercifully in competition with western trade, is one of the curiosities of the season.

An advance estimate from the reports of stock on hand, places the increase on September 1, over the amount on hand at the same date last year, at 90,000,000 feet.

Receipts of lumber, shingles, etc., for the week ending Sept. 4, as reported by the Lumberman's Exchange:—

	RECEIPTS. Lumber.	Shingles.
1884	56,753,000	18,838,000
1883	59,283,000	26,457,000

FROM JANUARY 1, 1884, TO SEPT. 4, 1884, INCLUSIVE.

	RECEIPTS. Lumber.	Shingles.
1884	1,169,082,000	580,222,000
1883	1,173,786,000	769,394,000
Decrease	4,704,000	189,172,000

LAKE RECEIPTS FROM JAN. 1 TO SEPT. 8.

Lumber	1,101,911,000
Shingles	556,565,000
Lath	42,588,000
Posts	2,088,146
Railroad ties	666,024
Wood, cords	18,183
Bark, cords	20,075
Slabs, cords	26,431
Telegraph poles	
Spars	
Piles	

STOCK ON HAND AUG. 1.

	1884.	1883.	1882.
Lumber & timber	555,403,975	510,799,847	511,903,574
Shingles	321,872,364	323,957,215	244,221,650
Lath	51,582,455	62,109,958	39,859,837
Pickets	1,034,739	1,802,911	1,717,165
Cedar posts	377,658	499,070	298,253

OSWEGO, N.Y.

1½, 1¾, 2 & thicker uppers	$42 00@46 00
" " " " pickings	32 00@35 00
" " " " cutting up	22 00@25 00
" " " " cutting up peckings	
peckings and better	32 00@34 00
1 inch selected sidings	28 00@30 00
1¼ " " "	30 00@35 00
1 & 1¼ in. box	12 00@14 00
" " sidings, dressing and better	22 00@25 00
1x10 in. 13 ft, dressings and better	20 00@25 00
" " shipping culls	14 00@15 00
" 14 & 16 ft. dressings and better	20 00@23 00
1x10 in. 14 & 16 ft. ship culls	14 00@15 00
1x12 " " " "	14 00@15 00
" " " dressings and better	20 00@23 00
1¼ in. stripe selected	23 00@25 00
1x" " dressings	16 00@17 00
" " culls	10 00@13 00
Ash.	
1st & 2nd, 1 to 4 inch	18 00@22 00
Culls " "	10 00@12 00
Basswood.	
1st & 2nd, 1 & 1¼ inch	18 00@20 00
Culls " "	10 00@11 00
Shingles.	
XXX Pine	3 25@ 3 25
XX "	1 90@ 2 10
XXX Cedar	3 25@ 3 25
XX "	1 50@ 2 00
Lath 1¼ No. 1	2 00@ 0 00
" No. 2	1 75@ 0 00

TONAWANDA.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$42 00@46 00
Common	14 00@18 00
Culls	11 00@14 00

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ℔ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	45 00@50 00
Pine, good box	22 00@32 00
Pine, common box	13 00@15 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in.	00 28@00 32
Pine, 10-in. boards, culls	00 16@00 21
Pine, 10-in. boards, 16 ft., ℔ M	28 00@32 00
Pine, 12-in. boards, 16 ft	28 00@32 00
Pine, 12-in. boards, 13 ft	28 00@00 00
Pine, 1¼ in. siding, select	40 00@43 00
Pine, 1¼-in. siding, common	20 00@00 00
Pine, 1-in. siding, select	42 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall stripe, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2¼x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Black walnut, gook, ℔ M	100 @120 00
Black waluut, ¼ inch	80 00@90 00
Black walnut, ¾ inch	00 00@85 00
Scaymore, 1-inch	30 00@32 00
Scaymore, ¼-inch	23 00@25 00
White wood, 1-inch and thicker	38 00@43 00
White wood, ¼-inch	30 00@32 00
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@85 00
Cherry, common, ℔ M	25 00@40 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	38 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	4 50@ 4 50
" clear, "	0 00@ 3 00
" cedar, mixed	0 00@ 3 30
" cedar, XXX	0 00@ 2 00
" hemlock	0 00@ 2 00
Lath, hemlock, ℔ M	0 00@ 2 00
Lath, spruce, "	0 00@ 2 25

BUFFALO.

We quote cargo lots:—

Uppers	$45 00@46 00
Common	17 00@18 50
Culls	12 50@13 00

GLASGOW.

The *Timber Trades Journal* of Aug. 30, says: The list of arrivals is a pretty large one for the past week amounting altogether to about 8,000 loads at Greenock and Glasgow. It comprises four cargoes of Quebec timber and deals, and a large steamer cargo of Miramichi deals and boards. of lower port spruce deals there is a good supply in this market for the present.

At Grangemouth the arrivals of wood goods amount to about 5,900 loads for the past week, principally Baltic deals and battens.

Transactions at the auction sales held here in the course of the week, particulars of which are appended, have been to a fair extent, although of the various goods offered a large proportion was withdrawn, offers not meeting the views of exposers. The mahogany remaining unsold of the cargo offered on 26th inst. consists mostly of small sized wood, which is all that is now in this market in first hands. Fresh wood of good manufacture is in demand, large logs especially commanding good prices.

The sale of deals on 27th inst. was well attended, but comparatively few of the lots catalogued found purchasers, the offers for the goods withdrawn not being considered satisfactory by the brokers.

LONDON.

The *Timber Trades Journal* of Aug. 30th, says:—Messrs. Churchill & Sim's sale was not, as the catalogue showed, a very extensive one: but on Wednesday there was a very good muster of buyers, if not anxious to acquire stock, yet loth to let any opportunity slip of securing goods a very little over cost, and in many cases absolutely below the import price. The mobile pitch pine planks went, we consider, remarkably cheap, from £8 15s. 3 in. to £9 5s. for thicknesses above.

By comparison with the better class of pine and Baltic wood pitch pine has undergone an undue depreciation in value. Either the demand for the wood has slackened to a greater extent than for others, or private stocks are greatly in excess of the consumption, otherwise it is not easy to account for the low prices, comparatively speaking, which good sound wood now fetches.

The Swartvik flooring sold on Wednesday, went comparatively well, 3rd yellow 1x7 at 9s. 3d., being what the best Fredrikstad brands

for 2nd quality fetched on the last occasion; so with the 1st white of Dickson's manufacture, which, at 9s. 3d., can hardly be said to have gone badly, or the 3rds at 8s. 6d. either.

In spite of the large stocks in the docks and at the yards, the demand for this description of manufactured wood appears to have plenty of vitality in it, and buyers seem to spring from the ground and come to the rescue just at the right moment when the import is abnormally large, and prices on the eve of sinking.

The pine ex Janet Ferguson, from Quebec, without reserve, 3x10 13 feet at £8 other sizes, seemed cheap, and the same with 9 to 7 in., at £7 to £7 15s., but though these goods were a fair parcel, they were not consumers' goods, being 1883 cutting, and consequently not dry enough for use.

Quebec spruce showed a slight improvement again. The regulars, ex Inga, 3rd quality being in a somewhat better request than on the last occasion when these goods were submitted.

TYNE.

The *Timber Trades Journal* of Aug. 30, says: The arrivals have been on a very small scale, and call for nothing of special comment. Business has been entirely interrupted by the visit of the Prince of Wales, practically the whole of last week having been given up to the reception and attendant festivities. His Royal Highness had a most brilliant and enthusiastic reception by the northern people, and cannot fail to have been impressed by it. Trade still remains quiet, and in special trades, such as shipbuilding, &c., there is not the slightest improvement to notice. In housebuilding and contracting, however, a fair amount is being done, and so far it shows no sign of cessation.

PORT ARTHUR, ONT.

There was shipped from this place on Aug. for Calgary the first car load of material ...rely local manufacture. To Messrs. ...ks & Co., belongs the honor of this initial ...ment west. It consisted of the first ... from the planing mill just opened by ... m, and marks, we hope, but the beginning of a large and important industry. The pine from which the flooring was made was cut within a short a short distance of here, rafted to the saw mill of the Algoma Lumber Company on South Water street, where it was manufactured into lumber, and dressed in the planing mill before mentioned. Thus the material is absolutely the product of this immediate neighborhood, and is in consequence thereof deserving of more than passing notice. With such a satisfactory beginning to a really important enterprise the firm in question may well be congratulated and we hope now that it is demonstrated beyond peradventure that this locality is well situated as a manufacturing centre that others will be stimuluted to action at no distant date. Enterprise such as this has made Port Arthur what she is to-day, and a continuance of it can not fail to place us in a position of permanent independence.—*Sentinel.*

TIMBER AND TOOLS.

It is a fact well known to mill men that it is not always the harder woods, in the ordinary acceptation of the term, that are the most wearing to the saws. Many practical persons marvel at this and wonder to themselves why a piece of timber showing small crushing, tension and other strengths, requires more power to work into lumber, and at the same time wears out the saws and cutting tools faster than other varieties of timber, the strength of which, in most respects, is greater.

A log of black walnut and one of burr-oak of the same size worked into the same sized stuff will show widely different results on both saws and machinery. If we attempt to rive or split these logs the walnut will work much easier than the oak, and so far as the various strengths are concerned the oak is superior by far, but when worked or cut into tools of any description the walnut presents much greater resistance than the oak, and the same is true as regards many other varieties of hard and soft timber.

If we take a longitudinal section of these comparatively soft timbers which are so hard on cutting edges, we find the minute pores or interices filled with minute glistening particles or crystals, and subjected to chemical analysis we will find them composed of silica, one of the very hardest minerals known, while with the hard, easy-working woods they will be found nearly or quite absent by both the microscope and analysis. These little particles, so finely divided as to be insusceptible of ordinary touch, are really a better grit than ordinary sand, and are the means of cutting off the fine edge of cutting tools, as saw-teeth, plane-irons, and the like.

Two plane-irons, made of a fine quality of steel, as near alike as it was possible to make by an accurate skilled mechanic, were each hardened in our laboratory by means of mercury, then finely sharpened, that the edges of each presented precisely the same appearance beneath the magnifier. These were each inserted in an ordinary plane and one placed on oak, the other on a piece of walnut, both pieces of wood having been previously dressed. At the rate of one hundred pounds pressure, each iron was crowded forward four inches. On the oak stick, the pressure from the rear indicated 809.5 pounds, while with the walnut the indicator showed a pressure of over one thousand pounds. The irons were both now withdrawn, and the first placed beneath the microscope, the one used on the oak presented a general upset appearance, the edge of the iron showing a slight tendency to turn downward, there being sufficient generated by the friction to partially draw the temper along the minute edge, which, however, would not extend back sufficient to materially effect the wearing and cutting properties of the iron if in constant use.

The iron used on the piece of walnut showed a scratched, notched appearance all along the minute edge, and by the aid of the most accurate means of measurement at hand, these notches were all of the same depth, but different distances apart, proving conclusively that the particles of grit or crystals which caused them, by being harder than the best mercury hardened steel, were all of the same size, and evenly distributed, as far as regards depth of deposit in the grain of the wood. The small spaces of the iron edge between these notches or scratches were found nearly as the entire edge appeared originally, showing again that the cellular tissue of walnut, outside its mineral deposits, was really softer than that of oak; hence, were it not for these deposits the timber would cut much easier. Of course, if the iron had been drawn back, and again shoved through, the notches would have been more apparent and general increasing each time, and distance showed until the entire cutting edge had been of itself cut off.

Consulting the laws governing plant or vegetable growth, we are told that all food before becoming fit for assimllation must be reduced to its gaseous state. If this be so, the question arises, how, or by what methods of plant-growth and assimilation, is it possible for silica to appear in its original crystallint state among the tissues of the growing or matured tree? while it is universally known that this variety of wood grows only where this mineral is abundant in some of its modified forms. This, however, is not of great interest to manufacturers just how it gets there, but that it is present is shown conclusively. To get rid of it, even were it possible, would destroy the beauty and general characterists of walnut, and to overcome its action on tools, rapid motion and softer iron is the best, safest and most efficacious method.—*Lumber Trade Journal.*

BOATS FOR THE NILE EXPEDITION

We have the following particulars of a boat built by Messrs. John Reid & Son, of Portsmouth, for the Nile expedition, and tried on Monday in the Gun Wharf, Cumber, under the direction of Colonels Butler and Alleyne, of the War Office, and some officials of the Admiralty. The boat is 30 ft. long by 6 ft. 6in. beam, and 2½ ft. deep, is built of fir painted white. carries twelve oars and two sales, and her weight is about half a ton. She is said to be roomy and buoyant, with a flat floor, and is provided with awnings and other conveniences. A working party of seamen from the Asia, guardship, stowed on board two and three-quarter tons of commissariat stores, biscuits, preserved meat, vegetables, lime juice, and ammunition, it being intended to allow 350 rounds of ammunition for each of the 12 men to be carried. The provisions will, it is believed, last 100 days—the period required for going up and down the Nile. The stores were packed in oblong and square boxes, and with the 12 seamen also on board the boat exactly represented the condition she would be in when forming part of the expeditionary flotilla. He mean draught was 1 ft. 8 in., or 4 in. under the prescribed limit. The total weight then on board was estimated at over 3½ tons, including valises, camp equipment, and other necessaries. Thus for stability the boat answered all expectations and she was pronounced by the War Office and Admiralty representatives all that could be desired. Fou hundred of these boats are to be built, and doubtless, Messrs. J. Read & Son will have a large order to execute for the Government, a their trial boat gave so much satisfaction.—*Timber Trades Journal.*

THE FIRST SAW MILL.

The first saw mill in England was erected by a Dutchman, near London, in 1663, but the determined hostility of the hand sawyers to the new machinery caused the mill to be abandoned shortly after its completion. More than a century elapsed before another was erected, but in 1767, a London timber merchant named Houghton built one at Limehouse, which was driven by wind. The work was under the direction of James Stanfield, who was sent by Mr. Houghton to Holland to study the construction and management of sawing machinery. As soon as the mill was completed a mob assembled and destroyed it. The owner being identified by the government, and the principal roiters having been punished, a second mill was built and allowed to work without further molestation.—*Ex.*

Silver Lining in the Clouds.

Reports from the east speak of the fact that the lumbermen are full of confidence and bouyancy of spirit in regard to the silver lining in the business clouds, which portends a heavy volume of business during the balance of the season. They are all confident of an active demand for lumber from this forward, and although profits may be light, yet building is active in every direction, and the volume of business will enable dealers generally to realize fairly.—*Lumberman's Gazette.*

Big Business.

The Tittabawassee Boom Company, says the *Lumberman's Gazette*, has been doing remarkable work the present season. Up to Sept. 1st, the company had rafted 421,000,000 feet of logs. The comparison with the previous years named to this date is as follows:

	Feet.
1882	400,000,000
1883	260,000,000
1884	421,000,000

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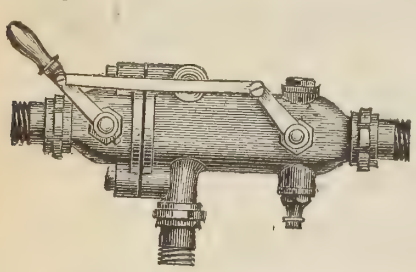
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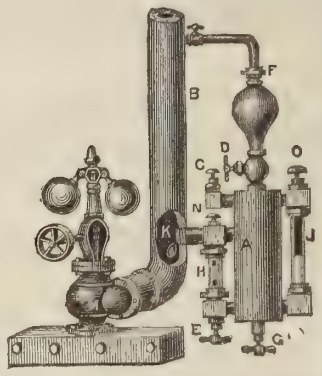
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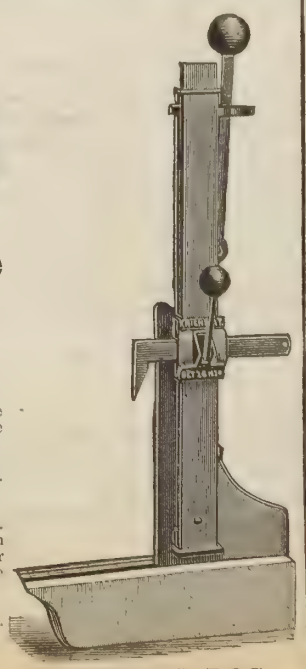
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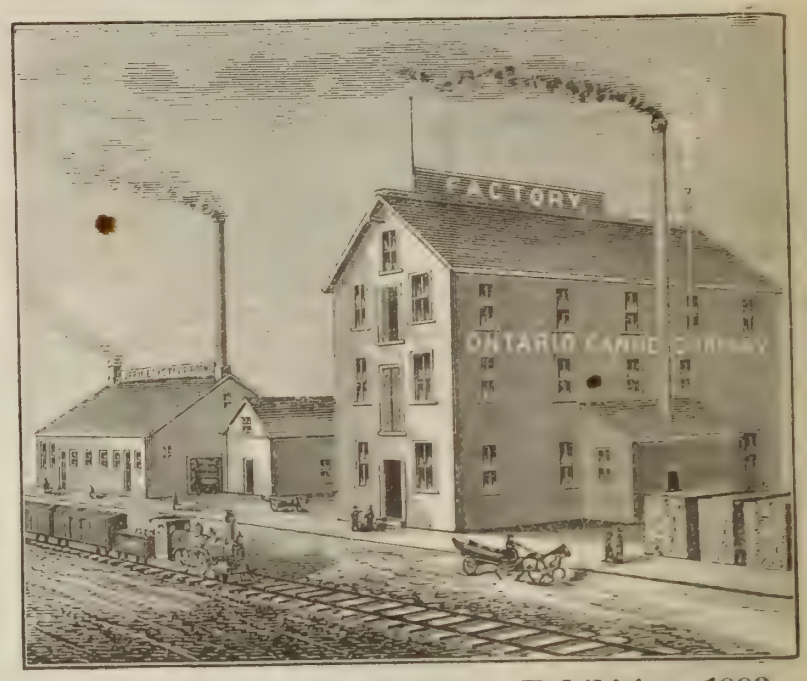
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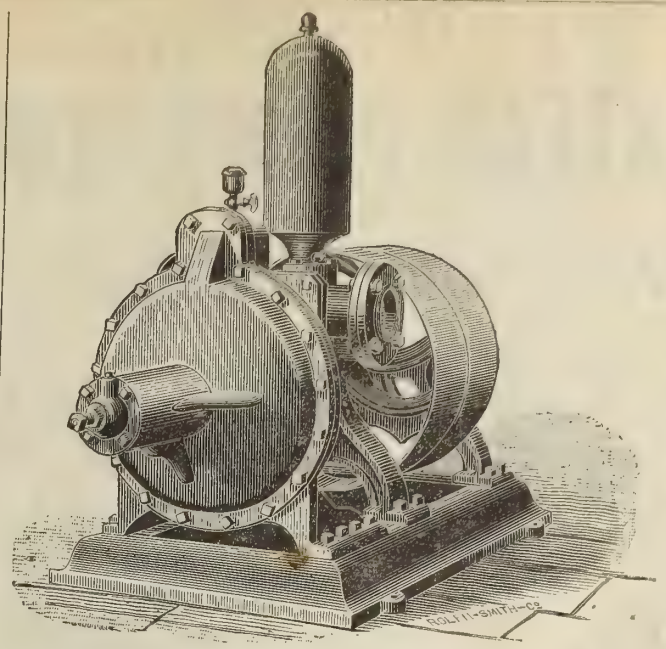
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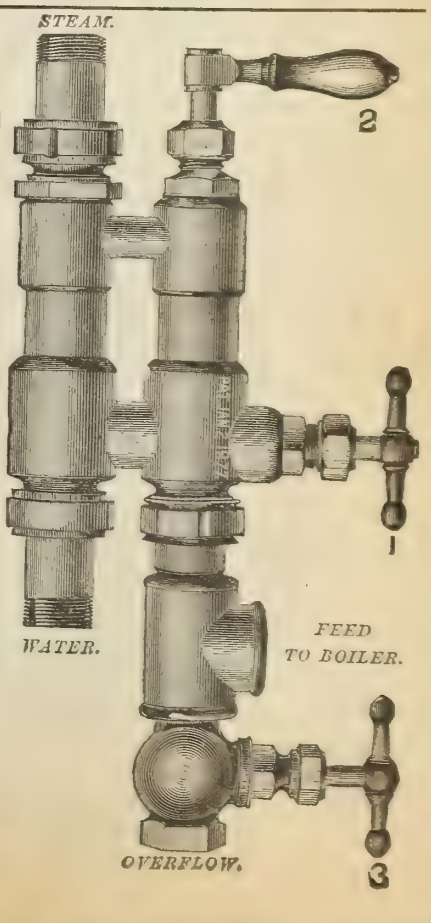
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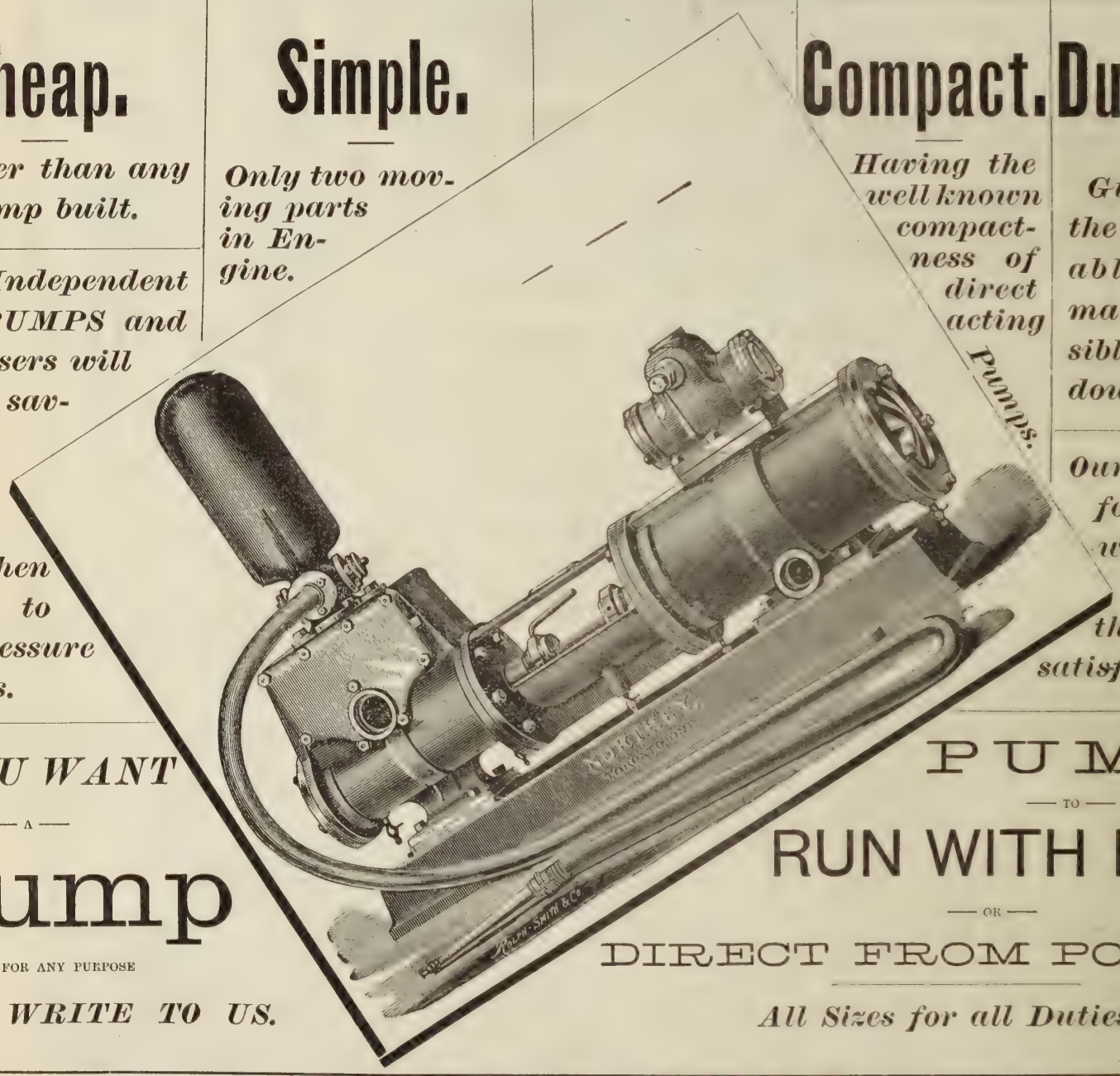
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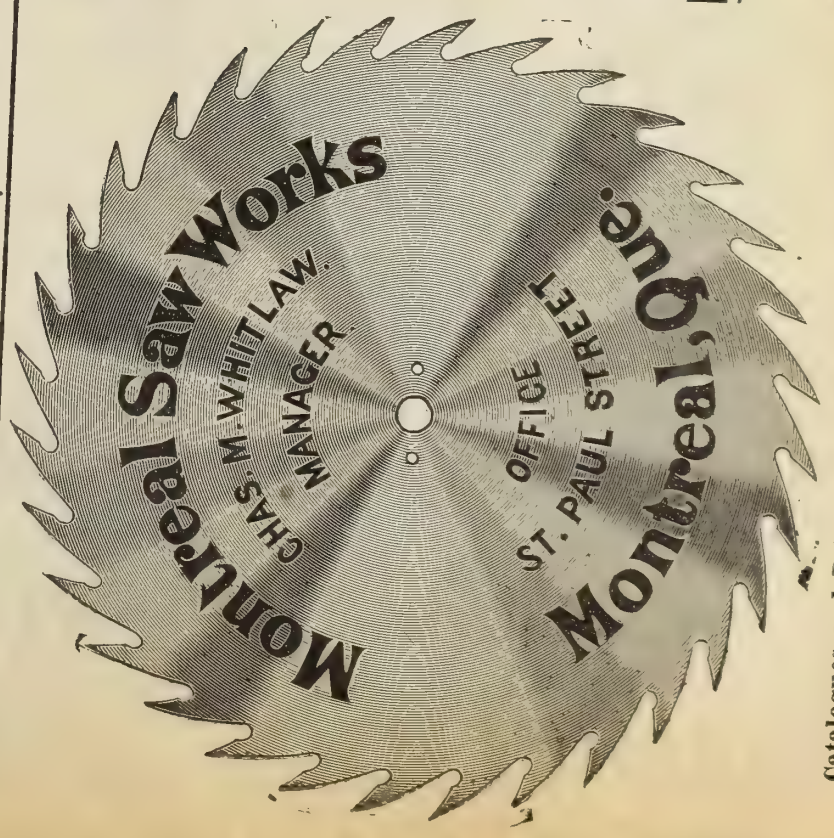
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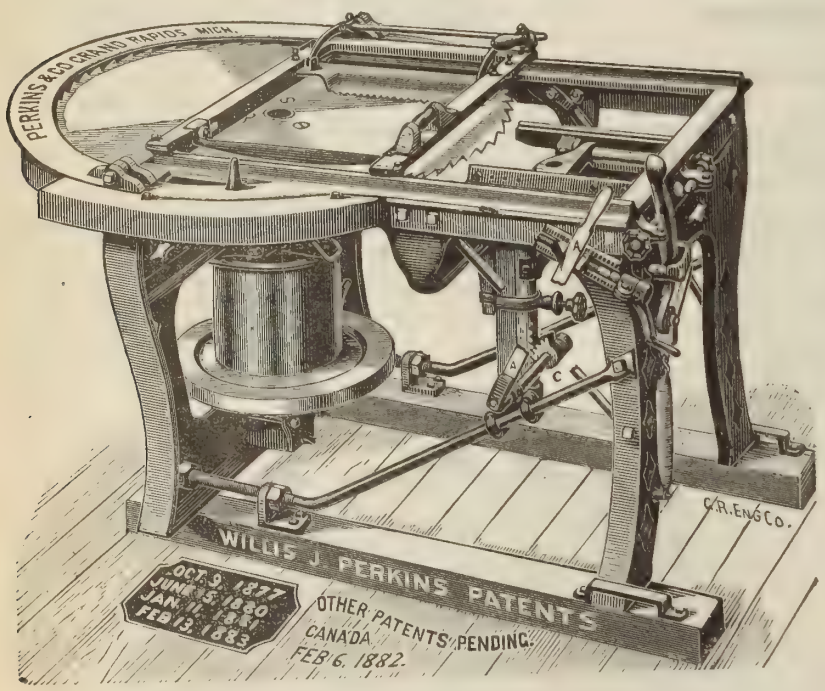
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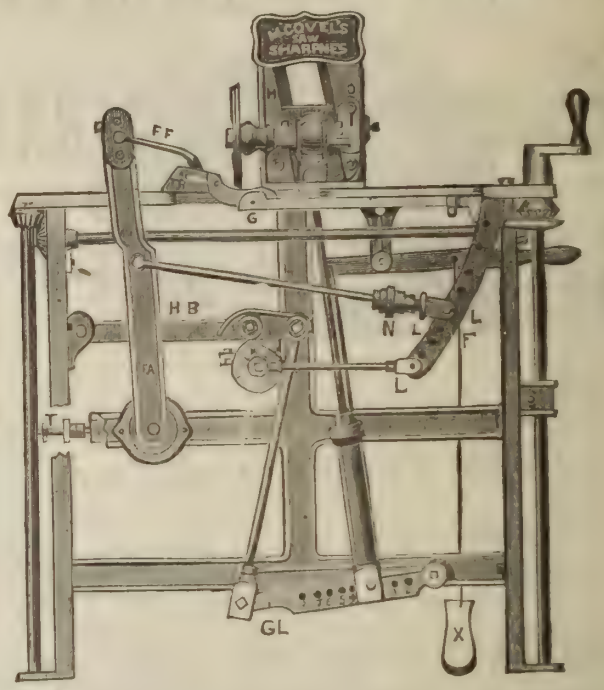
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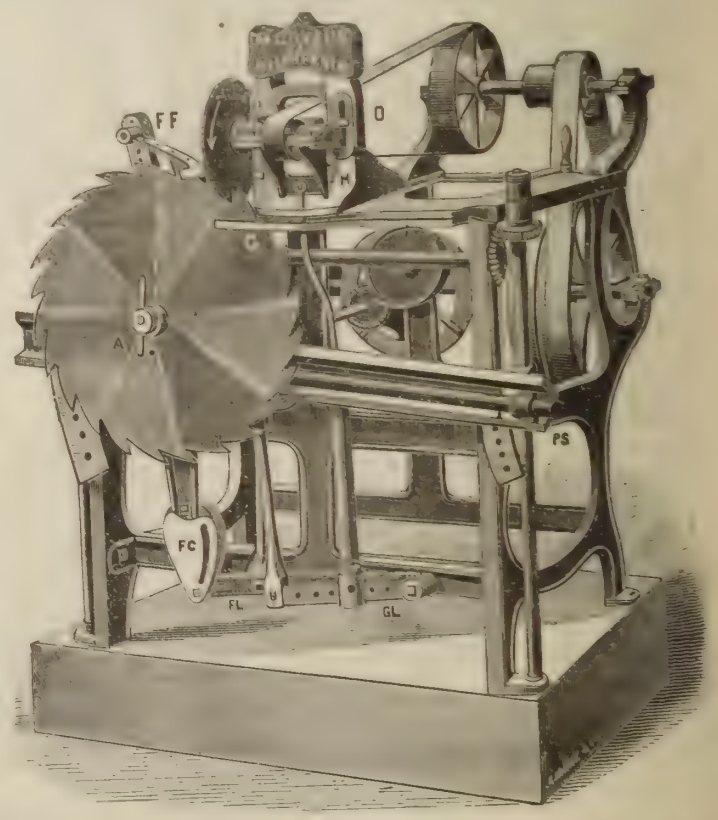
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VOL. 4. **PETERBOROUGH, ONT., OCTOBER 1, 1884.** **NO. 19.**

FORESTRY IN CANADA.

Among the papers read at the meeting in Montreal of the British Association for the Advancement of Science was one by Mr. A. T. Drummond, on "The Distribution of Canadian Forest Trees in its relation to climate and and other causes," in which it was pointed out that there are ninety-five species of forest trees in Canada. The Province of Ontario has 65 species of which 61 are found in the districts bordering Lake Erie. Of these 65 species 52 extend eastward to the Province of Quebec, 35 are found on the easterly and westerly sides of Lake Superior, whilst only 14 range westerly into the prairie country at and beyond the Red River. Again, in British Columbia there are 35 species, of which only seven extend eastward beyond the influence of the Rocky Mountains, and with one exception those seven are well distributed over the whole Dominion. Only three of our Canadian trees are identical with European species, the chestnut, white birch and yew. Canada may be divided into four great forest areas or zones, which may for convenience be termed the zones of the (1) Douglas fir, occupying Central and Southern British Columbia. (2) Poplars, covering the whole country from the most northern limit of the growth of trees southward, east of the Rocky Mountains, to the South Saskatchewan, Qu'Appelle and Winnipeg rivers, Lake Nepigon and Anticosti, in the Gulf of St. Lawrence. (3) White and red pine, extending from Lake of the Woods and Lake Nepigon to Anticosti, thence to the Georgian Bay, Lower Ottawa River and Nova Scotia. (4) Beech and maple, occupying those parts of Ontario and Quebec lying south of the zone of the pines. Along the shores of Lake Erie is what might be almost regarded a a fifth zone, very circumscribed in area, but having within it several outliers of the forests of the Middle States. The frequent peculiarities in range of forest trees in Canada are due to physical conditions and differences in climate, resulting from differences in these conditions. The northern half of the American continent consists on the one side, of enormous stretches of continuous land and has, on the other in its midst, immense areas of water and widely and deeply indented shores—Labrador and the great section of country lying between Hudson Bay and the great lakes and the Gulf of St. Lawrence being virtually one immense peninsula. The double effect of a northern latitude, and the presence of these great bodies of water is very marked in the lower general temperature, the shorter summers and more severe winters. These influences check the northern range of forest trees beyond the outlet of Lake Superior, and, with the aid of the branch Labrador current, prevent their extension down the St. Lawrence below Quebec. The great chain of lakes from Superior to Ontario have not only their effect on temperature, but, by their great width, create a barrier to the northward extension into Canada of many United States forest trees. A remarkable feature in forest distribution is the fact that immediately west of Lake Superior many of the most important trees, as white pine, basswood, red oak and sugar maple, are no longer found. The prairie appears to form a barrier to westward distribution. The prairies were probably at one time covered with trees which have been destroyed by fires. The effect of this has been to create a less rainfall, a quicker drainage from the soil, a dry atmosphere and constant exposure to high prairie winds, all of which appear to be inimical to many forest trees. British Columbia has a distinctive forest area of its own. The trees are largely of the pine family, and, with seven exceptions, do not range east of the Rocky Mountains. They are similar to those of Oregon and Washington, and the direction of the mountain ranges and similar moist climate has favored this. The white pine, yellow pine, and Douglas spruce are more or less known to commerce, but there are several other British Columbia trees which are as yet comparatively untried. In the near future the lumber trade there is likely to attain large proportions. Referring to the North-West it was pointed out that the future cities and towns could exist only where abundant water was present and that thus the supply of water in the rivers was of vast importance. To preserve a constant and uniform supply it was absolutely necessary to have the source of each important stream examined. If forests already exist there, then reserve a large area of them from public sale, if they do not, then the Government should at once promote the planting of forests or institution of national parks at such points. There are numerous rivers requiring such attention.

The above paper was followed by one by Mr. G. P. Hughes on "Forests, their value meteorologically and as national reserves." The author, taking a retrospect of the primeval forest, and regarding it geologically, pointed out that civilization and the arts must ever remain indebted to the imbedded forests of preglacial times. He referred to some of the instances we have in Great Britain and America of forests perpendicularly fossilized by subsidence into tranquil water, thereby furnishing a means by which the age of the formation may be calculated, and the structure of tree be observed. He referred to the dependence of man in all ages of his history upon the forest for material for houses, ships, implements and the production of heat. Calling attention to the denudation of most eastern countries once famous for civilization and the arts, and to the hurtful destruction of valuable timber even in one day. The result has been greater climatic changes, and in the tropics a barren deadness, where once great states held sway. He advocated planting the creek and reservoir margins in Northern Australia and tropical India, and quoted authority to back out his own opinion that among improvements to property planting offers the most certain returns in material, shelter and ornament. He gave a sketch of a course of study for a school of forestry and advocated state and a privilege to such institutions in order that our national forests may be supplied with scientific heads of departments. He made an appeal to British America to set aside forest reserves adequate for all future requirements.

The President announced that he had received a paper from Dr. Franklin A. Houghton on "The Future Policy of the Forest Management of the United States," the general conclusions of which were that the people needed instruction and that colleges should take the matter up, as well as schools, for which there should be teachers capable of giving practical instruction on the subject.

After a brief discussion Sir Richard Temple recommended Canadian foresters to visit the Norwegian forests.

PRACTICAL FORESTRY.

To the Editor of the Canada Lumberman.

DEAR SIR,—I have contracted for 5,000 black walnut trees, four feet high, to come from the Western States. The cost will, laid down free in Oshawa, including distribution, freight, duty, etc., not exceed twenty cents each coming in car loads. I bought them for the purpose of inducing the residents of Pickering, East and West Whitby, Reach and Darlington, including the towns and villages, to plant them in and about their homes. I will give them to anyone who desires them (not exceeding ten) at actual cost. They are a very rapid grower; make a beautiful shade tree, bear a delicious nut and are very valuable for lumber whenever it might be desirable to cut them down, I have thought that five or six of them planted in a circle, say 75 feet in diameter and one in the centre, would make a very beautiful and desirable group of trees for shade for cattle. They will also add to the beauty and comfort of homes when planted in and about the houses and barns; but, I would suggest to those who plant them that they trim them when very young, by degrees, so as to leave the main trunk 18 or 20 feet high before any limbs are allowed to branch out. This will add to their value in the future for lumber. Three trees planted near Hamilton, 30 years ago, are said to be now worth $100 each to cut down for lumber.

I will file any applications which are sent to me for them in the order in which they are received and fill them in the same order. They will come early in the spring, but I would like to know, at as early a date as possible, who would like them. I have taken the trouble to get these trees solely for the purpose of adding to the beauty and comfort of the homes in this section. I am sure any one who plants them will feel repaid within a very few years and that his children and children's children will thank him for it. One planted in my garden bore nuts the third year after planting.

I am, dear sir, yours very truly,

F. W. GLEN.

WORTH SEEING.

The following letter is from the Hamilton *Spectator*:

DEAR SPEC.,—Taking advantage of the last warm spell, and combining business with pleasure, I started from Hamilton by steamer Southern Belle for Toronto, where taking the steamer Passport I proceeded to Montreal. Staying over night at that city I took the 8.45 a. m. train of the Canada Atlantic Railway and arrived at Casselman, a distance of 87 miles from Montreal at 11.20. A very fine country is passed through and fairly timbered. At Casselman I was met by Mr. Mackay, the courteous representative of Messrs. Flatt & Bradley, who showed me over the mill, which is well worth seeing. The mill stands alongside the Nation River, is substantially built and with machinery of the lastest improvement, and everything about it so perfect that one is astonished at the rapidity with which the logs are handled. Stretching away to the south and to the east are the timber limits belonging to the firm, and here you see the virgin forest to perfection as not a stick has been culled from the land. Stately pines, of a growth to gladden the heart of a lumberman, magnificent oaks and other trees meet your view in all directions; and as you return your steps to the station from this almost primeval spot, now abounding with game, you say to yourself, in a few years all this will be smiling farms, and as you step into the cars and are borne along you turn once more to gaze at the mill, which stand a monument to the energy and enterprise of this well known firm.

J. T. ROUTH.

Reducing Expenses.

A novel project is on foot among the owners of lumber vessels in the Chicago and Michigan trade to reduce expenses. Says the Chicago *Inter-Ocean*: "It is proposed to arrange with certain tugs in Chicago and at Muskegon for the towing of vessels all the way across the lake from port to port. Tows of three vessels each are to be made up. A Muskegon tug will bring a tow of loaded craft half way across the lake, where she will be met by a Chicago tug with three light vessels. The tugs will exchange tows and return to their home ports." By this arrangement schooners can compete with steam barges, and the tugs, it is claimed, can also be sure of towing and can make some money out of it."

BOARD OF TRADE RETURNS.

The following are the returns issued by the Board of Trade, for the month of Aug. 1884, and first eight months of the year :

MONTH ENDED 31ST AUG, 1884.

	Quantity.	Value.
Timber (Hewn).	*Loads.*	*£.*
Russia	24,717	45,905
Sweden and Norway	67,280	97,834
Germany	28,885	66,944
United States	15,364	59,304
British India	219	2,683
British North America	59,529	264,082
Other Countries	32,813	50,069
Total	228,807	586,821
Timber (Sawn or Split, Planed or Dressed).		
Russia	202,237	437,566
Sweden and Norway	214,225	453,930
British North America	168,431	400,606
Other Countries	35,323	107,771
Total	620,216	1,399,873
Staves, (all sizes)	15,841	64,915
Mahogany (tons)	1,569	15,818
Total of Hewn and Sawn	849,023	1,986,694

EIGHT MONTHS ENDED 31ST AUG, 1884.

Timber (Hewn).		
Russia	159,847	303,675
Sweden and Norway	428,367	638,763
Germany	202,579	490,957
United States	139,493	509,343
British India	26,162	377,492
British North America	140,855	615,360
Other Countries	284,444	394,673
Total	1,381,747	3,330,263
Timber (Sawn or Split, Planed or Dressed).		
Russia	638,591	1,336,026
Sweden and Norway	1,079,747	2,306,426
British North America	589,980	1,393,107
Other Countries	304,592	935,797
Total	2,612,910	5,971,356
Staves (all sizes)	88,567	346,127
Mahogany (tons)	41,010	376,851
Total of Hewn and Sawn	3,994,657	9,301,619

FUTURE PROSPECTS.

The Montreal *Witness* takes a look into the future and believes that it would be better for lumbermen to curtail the amount of timber cut, as the most of timber trade will fall into their hands. It says :—

"It is stated that an unusually large number of lumbermen will be sent into the woods this fall, and therefore that the amount of lumber taken out will be ususually large, as the cheapness of supplies is a great inducement. Supplies are undoubtedly much cheaper this year than they have been for some time, but, unfortunately, it is impossible to dispose of the lumber already cut at its value, and it would be better to allow it to remain in the woods to increase in size than to cut it and then allow it to lie and rot in a piling ground, or sacrifice it at a price that will not cover the expense of cutting it. Matters will soon reach such a point on this continent that we Canadians will have the most of the timber trade, and the less lumber that is taken out now the greater will be our gain in the future."

MEETING OF LUMBERMEN.

A meeting of nearly forty of the lumber manufacturers on the Saginaw river met at the board of trade rooms at East Saginaw on Saturday, Sept. 20, to take into consideration the general condition of the lumber market and the best plan of relief. We learn from the *Lumberman's Gazette* that after a long discussion the Hon. N. B. Bradley submitted the following preamble and resolution :

"Whereas, It is unwise to manufacture more lumber than the markets require and will take at fair prices, and there being large amounts of manufactured lumber now on the docks, with a large stock of logs at the mills, it is, therefore, expedient that some action be taken looking to the reduction of that stock for the balance of the season, therefore :

Resolved, That the several boom companies which raft logs tributary to the Saginaw river mills, are hereby requested to close operations for the season immediately."

The resolution was unanimously adopted by a rising vote.

Mr. Bradly said he hoped every manufacturer and log owner would sign the agreement now being prepared for signature, as upon it the action of the boom companies would be largely predicated.

Mr. Arthur Hill submitted the following :

To the Tittabawassee Boom Co.:

GENTLEMEN,—You are hereby notified that we, the undersigned, are unable to receive more logs from your boom this season.

You will therefore cease rafting our logs at once for the balance of the season, and we hereby waive all claims for damages for failure to raft our logs during the present season.

The petition was agreed to and signed by all the firms present at the meeting.

Mr. Rust moved that similar petitions be prepared for presentation to the Au Gres and Rifle Boom companies. Carried.

Mr. Rust moved that the chair appoint a committee of three to circulate the petitions to the boom companies and obtain signatures of the log owners thereto, and present the same to the boom companies. Carried.

The chair appointed as such committee N. B. Bradly, J. A. Whittier and Arthur Hill.

The meeting then adjourned.

WHEN TO CUT WOOD.

Many seem to have an idea that wood should be cut in cold weather to have the stump sprout well, and there is a great prejudice against cutting in August, unless it is desired to clear up the land, because it is believed that a tree cut at this season of the year kills the root, or injures it so much that it will sprout but little, if any. June is also considered a bad month. Last year we had occasion to begin to cut wood in August, and continue it every month until August came again. The 20th of July a careful examination was made of the sprouts growing from the stump cut at the different seasons, and measurements made. We confess that the difference was so slight that it surprised us. The sprouts coming from maple stumps from which the wood was cut last August measured five feet, and we could discover no difference in the growth from the other stumps until we come to those that were cut in June. The sprouts from stumps that the wood was cut from during the first two weeks in June were about 12 inches in height, but it must be remembered that these stumps had to force out buds and make the growth in from five to six weeks. As the land is being cleared up the sprouts were all broken off the last of July, so the experiments ended, but it would have been interesting to have continued it, that the full growth of the year might have been ascertained ; to all appearance those cut in June promised the best. The stumps looked in the best condition, and the sprouts were growing very rapidly, much more so than those cut in the autumn or winter. The stump from which the wood was cut in March and April was wet and mouldy from the sap that flowed from them, while the stumps of those cut in the autumn and in June were dry and hard.

From former experience we have found that the stumps of trees cut in March often decay so rapidly that the sprouts when two years old will often blow down, because of the rottenness of the stump, while the stump of a tree cut in autumn, will dry hard and remain comparatively sound until the sprouts get large enough to support themselves.

The stump from which the wood was cut in July are sending up sprouts, but the first of August, were not more than 6 to 12 inches high. —*Massachusetts Ploughman.*

Another Canadian Enterprise.

A despatch from Detroit says that the large saw mills which have lately been erected by the timber companies at Wallaceburg, and along the Sydenham river, have been the means of employing a number of barges in a somewhat novel enterprise, that of carrying elm bark from the mills to the soap factories at Mount Clemens and other Michigan factores. The bark is burned, and when consumed to ashes and leached the lyre in the strongest kind. The immense quantity of bark stripped from the logs at the mills before they are sawed is sufficient to keep quite a large fleet of barges runing. The bark has hitherto been thrown away. The first cargoes of this kind just arrived in Mount Clemens.

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, Sept. 9, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., Washington, D. C. :—

304,815.—Log-binder—J. Flynn, Roscommon, Mich.

304,700.—Lumber stacker—W. T. Smith, Bozeman, Ala.

304,826.—Match-splint machine—A. G. Jones, Rochesterville, Ontario, Can.

304,724.—Planer, sliding—C. A. Graff, New York, N. Y.

304,715.—Saw—J. E. Emerson, Beaver Falls, Pa.

304,983.—Saw mill, gang—W. M. Wilkin, Erie, Pa.

304,996.—Saws, motor for driving—D. E. Dutrow, Washington, D. C.

304,873.— Stave-jointing machine—R. W. Travener, Bay City, Mich.

PATENTS ISSUED SEPT. 16.

305,054.—Bit brace—W. F. & E. B. Dake, Grand Haven, Mich.

305,130.—Bit stock—W. C. Marr & A. J. Maughlin, Onawa, Iowa.

305,170.—Log loader—M. Garland, Bay City, Mich.

305,672.—Match sticks, device for cutting —F. & B. Graham, Rockford, Ill.

305,393.—Plane bit.—W. F. Kellett, Chicago, Ill.

305,062 & 305,063.—Pulp machine for the reduction of wood—E. P. Ely, South Wallingford, Vt.

305,206.—Saw—C. J. Lowe, Cherryfield, Me.

305,391.—Saw table gauge—J. Cheney, Athol, Mass.

305,344.—Wood, etc., tools for finishing the surfaces of—J. Y. Simons, Amsterdam, N. Y.

PATENTS ISSUED SEPT. 23.

305,711.—Bark breaking mill—J. T. Phillips, Grand Rapids, Mich.

305,447.—Barrel heads, machine for trimming —A. Guerdan, New York.

305,712.—Lathe for turning polygonal forms —P. Prybil & E. D. Mackintosh, New York, N. Y.

305,519.—Lathes, cutter support for hollow mandrel—E. H. Hudson, Potterville, Mich.

305,485.—Sash rails, machine for shaping— G. W. Steele, Paterson.

305,660.—Saw-filing and gaging device—D E. Borger, Coal Hill, Pa.

305,556.—Saw-horse—R. Wylie, Napa City, Cal.

305,598.— Saw mill circular —J. H. Jones, Dardanelle, Ark.

305,538.—Saw mill head block—R. W. Shelburne, Blandville.

305,563.—Saw table gauge—E. Baer, New York, N. Y.

305,520.—Shaping and planing machine—G. Jungst, New York, N. Y.

305,518.—Stump puller—J. A. Horseman, Du Bois, Pa.

WHITE PINE ORNAMENTATION.

Some recent attempts with white pine appears to give it a value as an ornamental wood which its common uses have not heretofore suggested. The softness of its texture and its susceptibility to injury may have had some influence in preventing its general use for ornamental purposes, but the wood can be "filled," so that much of this objection is removed. Its pure white color—white as compared with other woods—recommends it for purposes for which holly has been heretofore used ; and the size of the timber from which clear lumber may be cut is greatly in its favor, boards of a width of sixteen and even twenty inches being not uncommon, with no shade of distinction between sap wood and heart, and only the faintest preceptible grain.

Some specimens lately examined show a greatly enhanced beauty by very simple treatment—the filling with warm shellac varnish, bleached shellac in alcohol, applied with a brush while warm. Several coats are given, the last coat being rubbed with pumice and rotten stone moistened with water, not oil. A finish of a flowing coat of copal varnish completes the preparation. Thus treated the wood is of a faint creamy tint with an appearance of semi-transparency. Beautiful gradations of tone were obtained by panels of this prepared pine, mouldings of holly, and stiles of curly or birds-eye maple, and fine contrasts were made with the pine and oiled black walnut.

The pine is too soft for floors, but for doors, casings, and chamber furniture it seems to be admirably adapted. The finest specimens of the wood noted come from Michigan, having fewer pitchy streaks and being of a more uniform color than the Maine product. Its ease of working by carving, and the coherence of its grain, are being utilized by masters and amateurs in the interior wood decorations. A beautiful carved mantel relieved by pilasters of oiled black walnut has been recently finished, which suggests the mellow tints of statuary marble after a short exposure to the atmosphere, while being free from the chilling sparkle and sheen of the marble.

ANOTHER FIRE IN CLEVELAND.

CLEVELAND, Sept. 21.—The scenes at the fire two weeks ago were repeated to-day on a smaller scale. The first fire, it was thought, originated accidentally, but to-day's occurences lead to the belief that it may have been incendiary. The fire occurred at noon in Monroe Bros. & Co.'s lumber yards on the upper flats. A large amount of property was destroyed, including 2,000,000 feet of lumber. When the flames were fairly under control, a dense smoke was seen pouring from the inside of the firm's dry house. There was no fire outside of the building and no wind to blow sparks from the large fire. It was undoubtedly the work of incendiaries. The second fire was extinguished with trifling loss. Between 3 and 4 p. m., when the fire department was about returning home, thick smoke, as if from coal oil, suddenly poured from the inside of the dry shed in Browne, Strong & Co.'s lumber yard, some distance from the other fires. Two suspicious looking men were seen watching this fire at its inception without giving an alarm, which strengthens the theory of arson. When the last fire broke out and it became certain incendiaries were at work, word was sent to the neighboring town for help and engines from Akron, Painesville, Sandusky, Elyria and Ashtabula. At 9 p. m. the fire was under control. No further danger is apprehended. Monroe Bros. & Co.'s loss is estimated at $60,000; insurance $160,000; Brown, Strong & Co.'s loss is estimated at $170,000; insurance about the same.

A Forest Mine.

There is a sunken forest of white cedar in New Jersey which has been mined for timber over seventy years. The industry of digging the sunken logs is carried on by the people of Dennisville, a village which was brought into existence through the buried wealth of lumber in its vicinity. Over the sunken forest, trees of large size are growing, and in many instances these are cut away to reach the more valuable timber three or four feet below the surface. The sunken trees are of enormous size. Their age is a matter of curious conjecture. It is probable they were buried many centuries ago by the action of an earthquake.

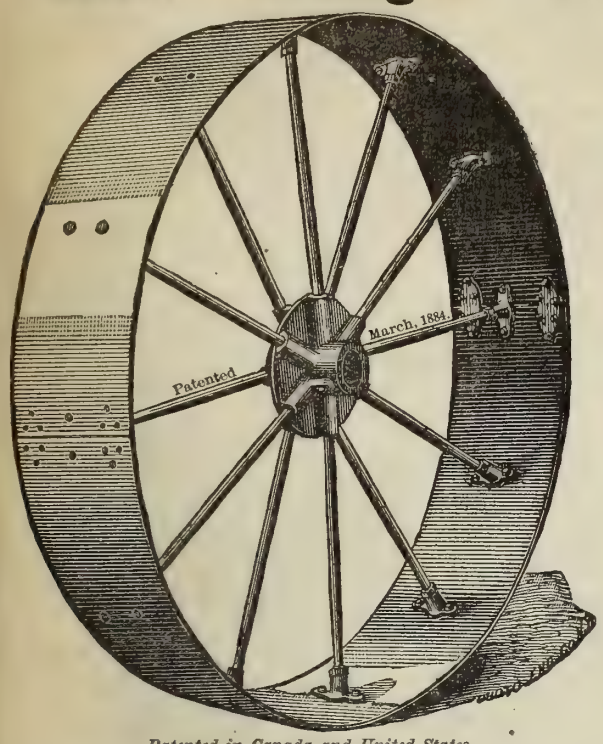
Lumber Insurance.

MONTREAL, Sept. 26.—The principal business transacted by the Fire Underwriters' Association was the classification of lumber risks, the rates on which were materially increased. The principal adopted was that of graduating the rate according to the distance of the lumber from the saw mill, discrimination between steam and water mills was observed. Rates are to be graduated with or without the average clause.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain and cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup for children teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentery and diarrhoea, regulates the stomach and bowels, cures wind, colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for children teething is pleasant to the taste, and is the perscription of one of the oldest and best female nurses and physicians in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

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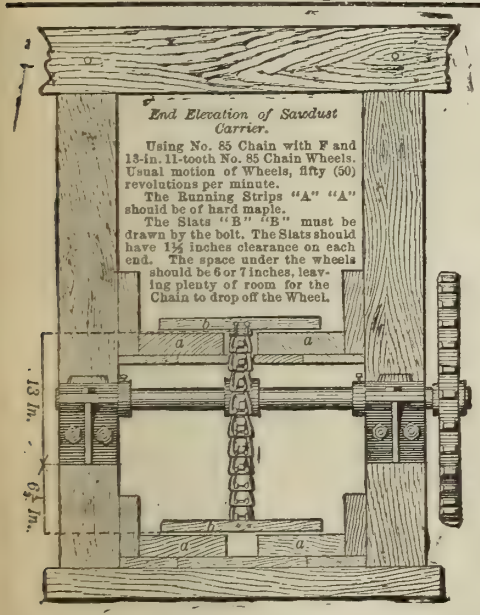
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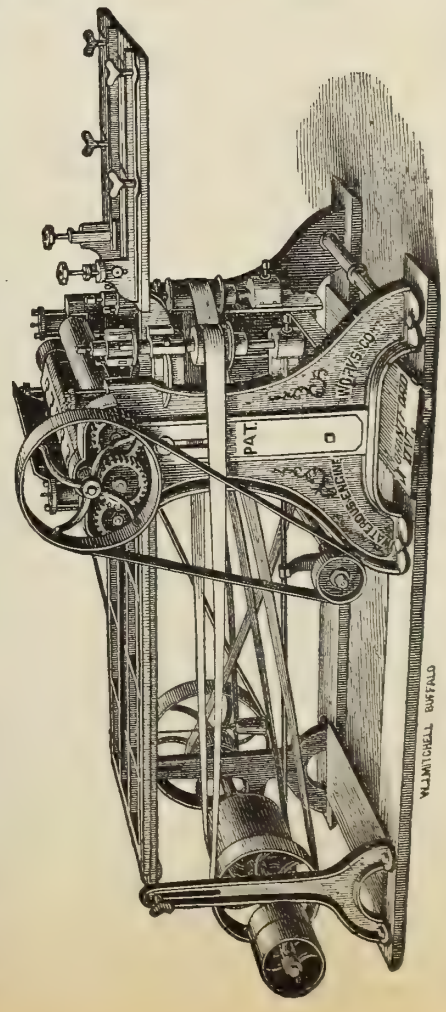
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49	"	12	"	"	6	"	49	" 11 " " 8 "	
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52	"	20	"	"	6	"	73	" 20 " " 8 "	
101	"	18	"	"	8	"	51	" 16 " " 8 "	
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36	"	12	"	"	8	"			

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BRANTFORD CANADA.

FORESTRY AND LUMBEB TRADE OF CANADA.

We take the following in regard to the forestry and the lumber trade of Canada, from a work, "Hand Book of the Dominion of Canada," by Mr. S. E. Dawson, one of the local secretaries of the British Association, which was published for the guidance of members of the Association :

FORESTRY OF CANADA.

Taking a general view of the great forest areas of the Dominion, some striking facts present themselves. The line of separation between the wooded and the prairie country west of the Lake of the Woods forms an abrupt barrier beyond which but few of the trees of Ontario, Quebec and the Maritime Provinces extend ; whilst the Rocky Mountains are found to be a divide separating from the rest of the Dominion a forest flora, which, with few exceptions, is distinctive of British Columbia, Washington, and Oregon.

There are ninety-five species of forest trees in Canada, of which Ontario, the most southerly of the Provinces, has sixty-five. Of these, all, with five exceptions, occur in the Lake Erie districts, fifty-two extend eastward into the Province of Quebec, thirty-four are found to a greater or less extent on the eastern and western coasts of Lake Superior ; whilst only fourteen have been observed to range westward to the Red River and the prairie country thence to the Rocky Mountains. On the other hand, thirty-four species of trees are found in British Columbia, of which only seven—the aspen poplar (Populus tremuloides), balsam poplar (P. balsamifera), canoe birch (Betula papyracea), white spruce (Abies alba), black spruce (A. nigra), balsam (A. balsamea) and red cedar (Juniperus Virginana)—extend eastward beyond the influence of the Rocky Mountains, but these seven are, with the exception of the red cedar, which is more limited in range, very generally distributed over the whole Dominion from the Mackenzie River to Nova Scotia. Eighteen, or more than one half, of the British Columbia trees belong to the Coniferæ or Pine family.

The leading economic trees of Ontario, nearly all of which range into the other eastern provinces, are

Basswood (Tilia Americana).
Red maple (Acer rubrum).
Sugar maple (Acer saccharinum).
Black ash (Fraxinus sambucifolia).
White ash (F. Americana).
Red elm (Ulmus fulva).
White elm (U. Americana).
Plane tree (Platanus occidentalis).
Butternut (Juglans cinerea).
Walnut (J. nigra).
Hickory (Carya alba).
Bur oak (Quercus macrocarpa).
White oak (Q. alba).
Red oak (Q. rubra).
Beech (Fagus ferruginea).
Hop hornbeam (Ostrya Virginica).
Canoe birch (Betula papyracea).
Black birch (B. lenta).
Aspen (Populus tremuloides).
Aspen (P. grandidentata).
Balsam poplar (P. balsamifera).
Red pine (Pinus resinosa).
White pine (Pinus Strobus).
Balsam fir (Abies balsamea).
Hemlock (A. Canadensis).
Black spruce (A. nigra).
White spruce(A. alba).
Tamarac (Larix Americana).
Arbor vitæ (Thuja occidentalis).

The prominent trees of Manitoba, which province may be considered as representing the Central District of Canada—are

Basswood (Tilia Americana).
Ash-leaved maple (Oegundo aceroides).
Green ash (Fraxinus viridis).
White elm (Ulmus Americana).
Canoe birch (Betula papyracea).
Aspen (Populus tremuloides).
Balsam poplar (P. balsamifera).
Black spruce (A. alba).
Tamarac (Larix Americana).

In British Columbia the leading trees, in addition to the six previously mentioned, are

Maple (Acer macrophyllum).
Alder (Alnus rubra).
Oak (Quereus Garryana).
Cottonwood (Populus trichocarpa).
Western birch (Betula occidentalis).
Western scrub pine (Pinus contorta),
White pine (P. monticola).
Yellow pine (P. ponderosa).
Menzies' spruce (Picea Menziesii).
Engelmann's spruce (Picea Engelmanni).
Spruce (Abies grandis).
Balsam spruce (A. subalpina).
Western hemlock (Tsuga Mertensiana).
Williamson's hemlock (T, Pattoniana).
Douglas fir (Pseudotsuga Douglasii).
Giant cedar (Thuja gigantea).
Yellow cypress (Chamæcyparis Nutkaensis).
Yew (Taxus brevifolia).
Western larch (Larix occidentalis).

The Government of the Province of Ontario has recently taken up seriously the question of preserving and replanting forests, and of tree-planting upon the high-roads and farms. The Government of Quebec has also wakened up to the importance of the subject, and has instituted an "arbor day" or annual treeplanting holiday throughout the province. But the efforts of those concerned in forestry have hitherto been turned chiefly towards obtaining more stringent regulations for preventing forest fires and for compelling the lumbermen to work their limits in a more economical manner. The forestry associations throughout the country are doing good, useful work in calling the attention of the farmers and settlers to the great and increasing value of wooded land.

THE LUMBER TRADE.

The lumber trade of the Dominion is still its most important commercial interest. The products of the forest considerably exceed in value those of the farm. The home consumption of lumber is large, inasmuch as building is chiefly done in wood. The quantity required for domestic use is estimated at two-thirds of the total quantity made, the balance finding its way to England, the United States, the West Indies, and South America.

The principal areas of timber lands lie in the provinces of Quebec and Ontario. The province of Quebec has under license 48,500 square miles producing 2,500,000 pine logs, equal to 386,000,000 feet B. M., and 1,301,000 spruce logs, equal to 106,000,000 feet B. M. ; white and red pine timber, 3,110,000 cubic feet equal to 37,320,000 feet B. M. ; hardwood, 51,000 cubic feet or 611,000 feet B. M. ; railroad ties, 143,000 pieces 32 feet each, making 4,576,000 feet B.M. ; cedar, equal to 4,500,000 feet ; pine and spruce, round timber, 5,760,000 feet B. M. ; besides tamarac, hemlock and cordwood, in all 549,976,000 feet, giving a gross revenue of $668,596 to the Province.

The Province of Ontario has 18,000 square miles under license, furnishing 2,600,000 standard pine logs equal to 520,000,000 feet of lumber ; 6,790,090 cubic feet of white and red pine, or 81,000,000 feet B. M. ; dimension timber 23,000,000 feet B. M. ; hardwood, cedar, &c., in all 635,500,000 feet B. M. ; paying to the Provincial Government $547,000. These figures are for the year 1880-81. The revenue from the crown lands both in Ontario and Quebec has increased since, for in 1883 Quebec shows $856,872, and Ontario $635,447.

In New Brunswick the cut of timber on Government lands equals 160,000,000 feet, yielding to the Province $152,000. Prince Edward Island yields no more than is required for home use. Manitoba and the North-west territories are sparely provided with timber, and the trade therein is still unimportant. British Columbia is more amply supplied, and as its facilities for export increase, it must develop a large trade. Its most important timber tree is the Douglas spruce or Oregon pine, which is the only kind that has as yet become of economic value. Its wood is yellow or reddish and coarse grained. It is considered inferior to the pine of the Ottawa region for finer kinds of work.

The most highly prized timber in the country is white pine, and the best qualities are to be found on the Ottawa river. The Ottawa white pine is justly famous for its softness, owing to which it can be easily moulded into the forms required for interior work. But the better qualities are being gradually depleted, and it is said that the proportion of high grade pine produced on the Ottawa river is rapidly decreasing. The production of spruce is relatively on the increase as a substitute in many ways for pine.

The timber lands held under license are operated subject to the following regulations :—Licensed lands are divided into limits commonly of about fifty square miles each. Upon the sale of a limit the Government retains its proprietary right in the land, selling only the privilege to cut and carry off the timber. The purchaser then has to pay a ground rent of $2 per mile annually. The licenses under which the land is held are renewable every year, and may be continued as long as the owner of standing timber requires the use of the land for his operations. In addition to this charge, the timber, when cut and brought away, is subject to crown dues, which vary according to the description of the produce. Pine logs pay 15 cents per standard log of 200 feet, board measure, and spruce logs pay 10 cents per log in Quebec. In Ontario, pine and spruce pay 22 and 5½ cents respectively.

Operations in the woods are commenced about the middle of December. Gangs of men are sent up by the first snow roads. Arriving on the spot of their labor, they build themselves *chantiers*, of rough logs, and prepare stabling for the horses, to follow about a month later. The work of felling and hauling goes on till about the 15th of March. By that time the product of the winter's work has been hauled to the bank of some stream and piled up on the rollway ready to be thrown into the river. The camps are then broken up, and the men are paid off. About a month later fresh gangs of men are sent up the river to tumble in the stuff and drive it to its destination at the market or the mill.

Consequent upon the alteration in the commercial policy of England which took place in 1849, the trade in lumber commenced to change its direction towards the United States. Between the years 1821 and 1832 the total export of productions of all kinds to that country averaged $3.257,153 annually, while in 1882 the trade in lumber alone with the United States amounted to $10,192,933. This further change also ensued that whereas in former years the lumber was exported to England in the shape of large pieces of square timber ; under the changed policy, saw mills of larger dimensions and increased capacity sprang up and the lumber was exported to England as deals and to the United States as boards. Thus employment was provided for an additional number of hands in Canada.

AN EVIDENCE OF RAPID GROWTH.

In the township of Freedom, Cheboygan county, Mich., a farmer, Mr. Charles Wilson, has discovered distinctive evidence that where now stands an immense growth of hard maple timber, there was once a corn field. Scattered through the forest are numerous piles of stone, apparently gathered off the land to make room for cultivation, and the corn hills are still distinctly visible and as regular in order and distance apart as if planted recently. Mr. Wilson concludes that these corn fields must have been extant centuries ago, since the full growth of maple timber has risen since. Though Mr. Wilson has probably let his imagination run backward too far, the discovery he has made suggests an interesting question in regard to tree growth in the northern part of the southern peninsula. Nowhere in the country is there a more prolific growth of rock or sugar maple. It is likely that the remains of the old corn fields that Mr. Wilson has found is evidence that the forests in that locality have grown more rapidly than is generally supposed. The corn hills spoken of are possibly the signs of cultivation in the days of the French missionary occupation in that region, when Marquette exercised the function of spiritual and civil dictator over the Indian tribes thereabout. Corn hills are found in the woods all along the lake shore from Cheboyan to Grand Traverse. The Indian method was to make a conical hillock, in the top of which the corn was planted. These "hills" were used for the same purpose year after year, and became so hard that they have endured to this day. Apple trees, yet in bearing, spindling up like forest growths, as if reaching for sunlight and a free space in which to spread, are also still standing. How far back these agricultural and horticultural endeavors date it is impossible now to determine. Often the corn hills are found in little circular cleared spaces, devoid of giant tree growths, but often again they are scattered where the tall trees stand thickly. Viewing the subject in any historical light we may, it is certain that the prolific forests of the northwest counties of the lower peninsula have developed very rapidly, showing the adaptability of the soil and climate of that region for tree growth. *Northwestern Lumberman.*

WIND, FIRE AND FLOOD.

Fire and floods, says the *Lumberman's Gazette*, have been fruitful of destruction to property, especially to lumber. The Chippewa and Eau Claire rivers in Wisconsin, and other streams in that state which poured their volume of water into the rivers named, spread devastation and ruin on every hand. The flood reached the highest point known for years, and nothing could withstand the force of the elements Buildings, bridges, logs, lumber, and even the roads, were swept away by the volume of the waters. In Eau Claire the destruction was terrible, over two hundred buildings being carried away, according to the despatches sent over the wires from that place. The losses are appalling, although a dispatch received from there on the 13th inst. says that all of the saw mills are left in good shape. They are temporarily shut down, but able to resume operations the coming week. There are plenty of available logs, but all of the dams on the Chippewa save the Della, were carried off. Lumbermen are discouraged but not disheartened.

At Alpena, Mich., the wind blew a hurricane, and the rainfall was wonderful—an inch in eight minutes. Houses, mill smoke stacks, and lumber piles were demolished. One mill lost its roof and 40,000 feet of lumber blown into the lake.

The fire scourage has been equally appalling and spread more generally over the country. Mitchell, Dakota, lost over $35,000 in lumber, besides $125,000 in other property ; Dubuque, Iowa, lost 6,000,000 feet of lumber by the fire fiend ; forest fires ravaged $10,000 worth near Reed City, Mich. ; Lumberton near Grand Rapids, lost 1,000,000 feet of pine besides other property ; Milton Junction lost $4,000 in lumber and tan bark ; a small saw mill near Coloma, Michigan, destroyed, loss $9,000 ; McLean's Siding, a station on the C. & W. M. railroad, destroyed, with lumber amounting to $20,000. These and numerous other fires throughout the country have struck the lumber piles hard, coming as they do on the heels of the destructive fire at Cleveland. It is estimated that 150,000,000 feet lumber has been licked up by the fire fiend during the season.

DEAL SHIPMENT.

Shipments of deals from Chatham, N. B., this season have been fully up to those of 1883, but only limited shipments will likely be made for the balance of the year. In 1883 about 140,000,000 feet was forwarded from Chatham and Newcastle, and 70,000,000 feet more was wintered over. Of the latter quantity, 40,000,000 feet have been shipped this season, so that, although Liverpool dealers were notified that the Miramichi quota this year would fall one-third short of 1883, the large amount wintered over and forwarded early this season brings the total figures up to those of last year. Rafting operations have been concluded a month earlier than usual, and preparations are already being made for next winter's campaign in the woods. The prospect is that the cut of 1885 will scarcely reach beyond 50 per cent. of an average year. —*Monetary Times.*

Lumber Destroyed by an Incendiary.

DUNNVILLE, Sept 16.—Early this morning a fire broke out in some lumber and ties which were piled on the canal bank about two miles below here. The lumber destroyed consisted chiefly of chestnut and maple, valued at about $5,000, and was the property of Mr. G. P. Moore, of Welland. The cause of the fire is not known, but is supposed to be the work of an incendiary. A very high wind was blowing at the time, which made it impossible to save anything.

THE MEXICAN WOOD-SELLER.

Beyond all artisans in the world, writes George Jacob Holyoake, I envy the Mexican wood-seller. He takes three days to cut his wood in the most romantic dells in the universe. He loads his asses in the morning sun. Spends a day in roadless gorges by the side of his four-footed friends. He takes another day in the quaint, sunny city of Santa Fe, selling his bundles. Another day he returns. For his six days' work he obtains five, or, if wood is scarce in the city, six shillings. With this money in hand he buys a pint of whisky, of quality very doubtful, the backbones of a couple of sheep, some coffee, or pepper, or some other spice. He does no more work while these provisions last. He takes no notice of the market, whether the prices are high or low. He revisits it only when his necessity compels him. He has no care, no master, no overlooker, no bell rings him up to work. He has no artificial wants—he breathes some of the purest air on this planet. In the far distance silver-capped mountains wait for his glance, sweet streams ripple at his feet, and if the sun fatigues him he sleeps under the bushes, and his faithful asses lie down and await his pleasure. The day is warm and undamp, the night cold but dry. No vermin, large fruit, grass not green, but rich, which feeds his asses without cost. When he pleases to wake he calls to his loaded friends, and they jointly pursue their way. No electoral agitation is about here. He knows nothing of Irish discontent or ritualistic troubles. Democrat and Republican, Tory and Liberal are alike unknown to him. The ballot box is not set up in his parts. He has health without effort, good teeth and black hair. His garments last for a generation—appearances and fashion concern him in nowise.

THE ECONOMY OF WOOD IN FRANCE.

A correspondent to the New York *World* describing how every foot of the soil is utilized in France, mentions the method pursued to supply the country with fuel by the growth of Lombardy poplar. The correspondent says: "In going from Paris to Geneva, *via* Dijon, we pass through the best portion of France. For hundreds of miles every inch of land is cultivated. The abrupt side hills are in grape vines and the flat land in grain. Here we see the phenomenon of double crops—a crop of grain and vegetables growing under a crop of trees. The Normandy poplar trees are from an inch to three feet in diameter. They are planted thickly, but give no shade. They are trimmed within six feet of the tops. The boughs, which are cut off every year, make fagots enough to warm France. We often see men and women cradling wheat or hoeing beets in the midst of a wood giving no shade. When you look across the country the tall, boughless trunks look like black streaks painted against the sky. They make the view very picturesque. Wood in France is sold for a third of a cent a pound. It is worth as much as corn in Kansas by the pound. So when the Kansas man burns corn, he is no more profligate than the Frenchman who burns faggots."

A Shining Tree.

A most remarkable tree or shrub grows in a small gulch near some springs, about twelve miles north of Tuscarora, is about six or seven feet in height, with a trunk which, at its base, is three times the size of a man's wrist. It has innumerable branches and twigs, and resembles somewhat the barberry trees. Its foliage at certain season's of the year is so luminous that it can be plainly distinguished in the darkest night for a distance of more than a mile, while in its immediate vicinity it emits sufficient light to enable a person to read the finest print. Its foliage is extremely rank, and its leaves resemble somewhat, in size shape and color, those of the aromatic bay tree of California. The luminous property is evidently parasitic, and consists of a sort of gummy substance, which, upon being transferred by rubbing to person's hand, imparts to it the same apparently phosphorescent light, while that on the leaf entirely disappears.—*Tuskarora, Nev., Times,*

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REMEDY FOR DRY ROT.

A remedy has been discovered, says the *Mechanical World*, by the use of which this destructive enemy to the woodwork of a house may be destroyed or arrested. What is known as "dry rot" is caused by the spores of a species of fungus (the Merulius lacrymans), which, though they are sometimes carried by currents of air to the scene of their future devastations, are more frequently present in the soil upon which the house is built at the time of erection, and are brought into near contact with the woodwork in the filling up between the joists, or sometimes even in the mortar. Notwithstanding its name, dry rot does not act upon perfectly dry timber, but begins its ravages whenever the wood is in the necessary state of humidity. It may be prevented by mixing with the rubbish used for filling in the floors the "tank waste" from alkali works, or the same substance will completely check it if already developed. Tank waste is of no commercial value, and may be had at alkali works for fetching; it wholly destroys this species of vegetable life, and generates no bad smell whatever.

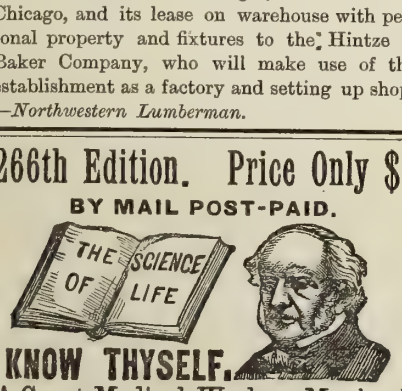
WHAT COLORS OF BUOYS MEAN.

When you enter any harbor in the world, said a pilot to a *Sun* reporter, where the channel is marked by buoys, you will find that those on your right as you pass in are painted red, and those on your left black. If you should see one painted in red and black horizontal bands, the ship should run as close to it as possible, because that indicates the centre of a narrow channel. Buoys with red and black checkers are painted on a buoy, it marks either a rock in the open sea or an obstruction in the harbor of small extent with a channel all around. If there are two such obstructions and a channel between them, the buoy on the right of you will have red and white checkers, and the one on the left will have black and white checkers. When a wreck obstructs the channel a green buoy will be placed on the sea side of the wreck, with the work "wreck" plainly painted on it in white letters, provided there is a clear channel all around it; otherwise, an even number will be painted in white above the word "wreck" when the buoy is on the right side of the channel, and an odd number if the buoy is on the left.

THE Wisconsin Sash and Door Company, of Chicago, Ill., which closed up its business last week, has sold its stock on hand to the amount of about $30,000 to Gauger, Olver & Co., Chicago, and its lease on warehouse with personal property and fixtures to the Hintze & Baker Company, who will make use of the establishment as a factory and setting up shop. —*Northwestern Lumberman.*

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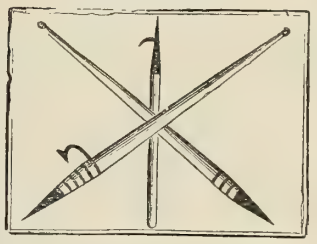
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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., OCT. 1, 1884.

LARGE tracts of valuable cedar have been burned in the vicinity of Kincardine, Canada.

THE schooner Regina, from Quebec for Buenos Ayres, with lumber, which put in to Gaspe damaged, had jettisoned a portion of her cargo.

THE saw mill, lumber yard and grist mill of F. S. Hall, at Southport, Chemung county, N. Y., were burned September 8. Loss about $18,000.

THE village of Pinconning, Mich., was surrounded by forest fires, Sept. 17, and was in great danger of being burned. All business was suspended.

REPORTS from Port Huron, Mich., Sept. 17, stated that forest fires were burning fiercely west of the town, and unless rain came its safety was threatened.

THE gang in the mill of the Conger Lumber Company, Parry Sound, Ont., broke twice within a week recently. The mill will probably be closed for the season September 20.

THE lumbermen around Ottawa are commencing to engage men for the shanties. An unusually large number will likely go to the woods this season owing to the low price of hay and grain.

FIRE totally destroyed the sash and door factory of T. Lewis, Trenton, Ont., on the morning of September 13, together with several other buildings. Total loss $4,000. Lewis had no insurance.

J. YORUM, working in Williams Bros.' mill, at Saginaw, Mich., was recently struck by a heavy piece of timber under the chin. It cut clear through and severed his tongue half an inch from the end.

THE big Casino mill, owned by W. H. Watson, near Cottonwood City, Meagher county, Mon., was burned September 5, together with the surrounding buildings and a quantity of logs. Loss, $60,000.

FOREST fires which have been burning for a week are causing much alarm in the villages of Ballston and Pleasant Mills, on the borders of Atlantic and Burlington counties New Jersey.

THE barge Conard Reed, lumber laden, was towed into Amherstburg, Canada, September 13, being waterlogged. It will be necessary to pischarge her cargo and pump her out before the leak can be repaired.

J. M. HOLT & Co.'s saw mill at Loch Lomond, two miles north of Philipsburg, Pa., burned September 10, together with several million feet of lumber, with shingles, lath, etc. Loss estimated at over $100,000; insurance, $75,000.

THE tug Sherwood, owned by Messrs. Rathbun & Son, Deseronto, was burned in the Bay of Quinte on Sept. 17th. There were six men and a woman aboard. Those who could swim got on shore, and by shoving out rails managed to safe the others. Everything aboard including the books were burned.

J. R. Sutherland & Co.'s extensive saw mill at St. Boniface, Man., was burned on Sept. 25, with its contents and a large quantity of lumber destroyed. The fire brigade from Winnipeg were quickly in attendance and prevented the spread of the flames. Cause of the fire unknown. Loss not yet estimated, but expected to exceed $15,000 or $20,000. Well insured.

THE exports of lumber from Montreal in August last amounted to 6,626,000 feet. Of this total nearly 3,000,000 feet in twelve steamships, went to Liverpool, 1,831,820 feet in four steamers, to London, the remainder to Glasgow, Bristol, Sharpness, Gloucester and Penarth Roads. All were steamers except two barques and a brig, the total number of crafts lumber laden, being 29.

THE latest news from Pinonning, Bay county, Mich., says the danger from forest fires is over for the present. The wind has subsided and the progress of the flames is checked. Fire fighting is still kept up, however, on all sides. The village of Arenac is in about the same condition. The danger seems over unless the wind changes and increases in velocity.

A MEETING of the creditors of the lumber firm of S. S. Mutton & Co., Toronto, has been called. The liabilities are heavy; the assets are not yet ascertainable. The direct cause of the trouble lies in certain of the firm's notes going to protest while in the hands of the Standard Bank, which is said to be interested. Last year the firm was stated to be worth $70,000 with $17,080 liabilities.

CANADA ranked low down in the list of prizes at the forestry exhibition at Edinburgh. Not one first or second class gold medal was awarded to this country. This is attributable to the supineness of our own people, for the only province represented at the exhibition was New Brunswick. Canada, properly represented, should be able to hold its own with any country in the world at such an exhibition.—*Ottawa Sun.*

FOSTER, BLACKBURN & Co., of Big Rapids and Baldwin, Mich., September 4th filed chattel mortgages to the amount of $93,022, to secure commercial and accommodation paper covering all their lumber, lath and saw logs at their mills in the vicinity of Baldwin, and a stock of goods at Baldwin. They also gave a trust deed to E. F. Uhl and D. F. Comstock, to secure certain creditors. It is thought the liabilities of the firm will exceed $100,000, and that assets will exceed liabilities.—*Northwestern Lumberman.*

Peterborough.

Mr. R. C. Strickland has just returned from the east, having sold to R. R. Dobell & Co. all the waney and square timber of his firm, realizing in the neighborhood of $90,000. The sale of timber at present is very slow, but the extra quality and average of the timber enabled him to effect a satisfactory sale. He has contracted for another hundred thousand to be delivered next year to the same firm.—*Review.*

FORESTRY.

Mr. Phipps is busy in the northern forests. We clip the following from the Pembroke *Observer*:

FOREST PRESERVATION.—Mr. R. W. Phipps, the Forest Conservator of the Ontario Government, is up here at present on a tour of observation through the woods. He left Pembroke by train yesterday for Mattawa, and will go on to Lake Nipissing, intending to stop at the various lumber stations, and traverse the intervening country by canoe or otherwise. The main purport of his visit to the lumber regions at this time is to get opinions from practical men, and ideas from personal observation, as to the best means of preventing forest fires, and also the most effectual method of preserving the pine forests in a roproductive condition. There is no doubt that if these objects can be carried out, the result will be very valuable to the country.

LOOKING FOR $75,000.

The Brockville *Recorder* says:—Benjamain Campbell is the name of the man who is searching for the raft of oak timber, sunk in the St. Lawrence river above Chippewa Point. Mr. Campbell has succeeded in finding what he thinks must be the timber. It seems to be in three parts in forty feet of water. The wreckers are expected this week to raise the timber. Mr. Campbell says his father was engaged in the lumber business before the war of 1812 and had got out a large quantity of oak timber in the town of Clayton, made it into a raft there and started for Montreal with it. When he heard that war had been declared he cut the withs and the floats and let the timber sink. The raft is said to have covered five acres of surface and is valued at $75,000.

THE FORESTRY CONGRESS.

The following in reference to the Forestry Congress appears in the Montreal *Witness*:

Hearing that the Hon. Mr. Joly, ex-Premier of Quebec, was at the Windsor Hotel on his return from the Forestry Congress at Saratoga, a *Witness* reporter waited on him yesterday, and found him taking a hasty lunch previous to his departure for home. In reference to the Forestry Congress, the hon. gentleman stated that it was not attended by Canadians as well as it ought to have been. There were only present from Canada Messrs. William Little and J. K. Ward, of Montreal, and himself. Mr. Ward read a paper on "Lumbering in Canada," which excited great interest; in fact, it was one of the documents which was listened to with the greatest of pleasure by the congress, and no one could wonder at Mr. Ward's success who remembered the magnificent lecture he delivered on the same subject before the Y. M. C. A., in Montreal last winter.

The Congress acknowledged with gratitude the ready compliance of the different Governments of the Dominion, and especially those of Quebec, Ontario and Nova Scotia, with the report made in the Montreal session in 1882, by a special committee, of which the late Hon. Geo. Bryson was chairman, "for the better protection of our forests." A regret was expressed that in the United States the same action had not been taken.

The meeting had a very practical purpose in the study of the question, which, though for the present effecting only the prosperity of the State of New York, and its great commercial metropolis, was nevertheless one of great interest in Canada, viz., "the effect produced upon the volume of water of the river Hudson by the destruction of the Adirondack forests, whence the river takes its source."

The waters of the Hudson are getting gradually lower every summer, so as to render navigation more and more difficult. It was evidently the opinion of the immense majority of the Congress that the shrinkage of the water or the irregularity of its flow was owing to the wholesale destruction of the forests. In order to ascertain the state of these forests a number of members, including himself, started for the Adirondack Mountains immediately after the Congress adjourned, and their report will be looked forward to with great interest, as the Legislature of the State of New York has taken the whole matter of forests under their earnest consideration. A report of the proceedings of the Congress, which will contain some highly interesting matter, will shortly be published, and copy forwarded to each member.

Speaking of his pleasure trip, Mr. Joly said he had taken his wife with him and they had enjoyed themselves very much. Saratoga was perfectly lovely and the weather was charming. When up among the beautiful mountains and lakes of the Adirondacks, he had never felt so delighted with nature's secenery. The party went over a number of lakes at the head waters of the Hudson and came back, one and all, delighted with the American Switzerland.

TYNE.

The *Timber Trades Journal* of Sept. 13, says: The arrivals of the past seven days have been on a very much larger scale, and comprise several cargoes of respectable proportions, amongst them being one steamer with an entire cargo of Sundswall deals; there is, however, no very heavy importation, and so far all the sawn goods coming forward appear to be finding their way into consumption, and are not preceptiblyincreasing the stocks. American goods are coming only very slowly to hand this season; few cargoes have as yet been imported, and, as the demand for all except yellow pine deals is very small, and stocks of other goods sufficiently large, it is well they are not coming forward in quantity. Pitch pine timber is still very largely held, and selling at very low rates, while in hardwood, oak, elm, etc., there is absolutely no sale at all. Pitwood is still a drug in the market, and can be bought at ruinously low rates.

On the 9th inst. Mr. R. Mack offered a cargo of redwood deals and battens by auction at Howden Dock; there were very few buyers, and in consequence the bidding was lacking in spirit. The cargo was cleared at about £8 5s., £7 5s., and £6 5s. for mixed 3rd and 4th deals; battens at £6 5s., £6, and about £5 10s. Not being a first-class parcel the prices must not be accepted as an indication of possible values.

Trade is still very quiet; the housebuilding, which has hitherto been very active, is showing signs of slackening, and on all hands the indications point to a very quite winter trade.

RAFTS ARRIVED.

The Quebec *Chronicle* has the following list of rafts arrived:

Sept. 15.—Collins Bay Co., pine, &c., Sillery cove.

D. D. Calvin & Co., oak and pine, sundry coves.

Collins Bay Co., oak, Ottawa cove.

John R. McRae & Co., staves, St. Michael's cove.

Sept. 17.—Collins Bay Co., staves, Bowen's (Sillery).

Thos. Buck, elm, &c., Ottawa cove.

John McRae & Co., staves, St. Michael's cove.

Sept. 18.—Price, Bros & Co., spruce deals, Lake St. Joseph.

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c, measured and culled to date:—

	1882.	1883.	1884.
Waney White Pine	2,135,259	2,670,909	1,749,647
White Pine	7,023,350	3,057,814	3,241,683
Red Pine	1,328,803	253,912	298,433
Oak	1,015,525	1,151,289	626,550
Elm	566,470	247,716	644,073
Ash	243,518	188,677	377,105
Basswood	1,373	1,859	3,992
Butternut	2,585	989	1,121
Tamarac	8,234	4,644	18,768
Birch & Maple	263,812	137,249	196,175
Masts & Bowsprits	33pcs	—pcs	—pcs
Spars	51 pcs	— pcs	41 pcs
Std. Staves	315.0.3.25	509.5.2.10	38.1.2.25
W. I. Staves	1041.0.0.19	449.1.2.9	78.0.0.2
Brl. Staves	42.8.1.17	87.1.1.27	0.6.2.13

JAMES PATTON,
Quebec, Sept. 19. Supervisor of Cullers

AN elm tree has been removed from Mr. Hale's estate at Alderley, Gloucester, 40 feet long and having a girth of 35 in., or nearly 4 yards in circumference, the weight being about 15 tons. It was sold in the early part of the year, at the timber sale of the estate.

ST. CATHARINES SAW WORKS!



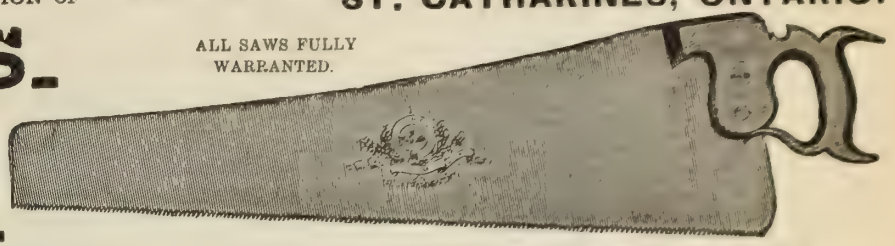
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Canada Lumberman

ANOTHER USE FOR SAWDUST.

Forest and Stream, a sporting journal, after referring to the very injurious effects which follow the depositing of saw dust in streams, says :—

"When urged to burn, or in some other way dispose of their sawdust, lumbermen have objected that they could not afford the cost. There is hope that the preplexing problem of dealing with this nuisance may now be solved, for a process has been discovered by which the refuse sawdust may be made to yield a handsome profit. When dry it is carbonized in iron retorts, and in the process there is given off 80 per cent. of volatile products, the remaining 20 per cent. being granulated charcoal, which can be used in making gun powder, filters, lining refrigerators, and as a disinfectant, and with a little tar it could be pressed into bricks and used for fuel ; 22 of the 80 per cent. of the volatile product are in the form of fixed gases, which can be used for heating, lighting, etc. ; 47 per cent. is pyroligenous acid, which is crude acetic acid, and after being purified and concentrated is used in white lead, color, print and vinegar manufacturies.

There remain 10 per cent. of tar and one of wood alcohol. The tar has the same properties as coal tar, the almost endless uses of which, such as pitching roofs, lining water tanks, covering the bottom of vessels, protecting iron from rusting, covering the wounds made in pruning trees, and in the form of benzole, naphtha, carbolic and sulphuric acids, and the whole splendid series of anilihe dyes, constitute one of the chief glories of modern chemistry. The wood or methylic alcohol is used as a solvent for gums in varnish making, in the manufacture of aniline colors. The sawdust from yellow pine and other woods rich in resin yields also a considerable amount of turpentine, in the gathering of which so many trees are every year sacrificed. It is estimated that in sawing inch boards of pine, hemlock, etc., the one-fourth inch saw-kerf uses up one-fifth of the log. When lumber is sawed by the billion feet, one can easily see that the question of disposing of the sawdust in a way to yield a profit, instead of a first-class nuisance, is a very important one."

A Great Fire.

CHARDON, Ohio, Sept. 20.—A disastrous fire has been raging for forty-eight hours in the woods, about two miles from this place. Nearly 150 acres of valuable woodland have been burned. The flames have invaded the vast swamp of several hundred acres. Notwithstanding the effort to check their progress the flames continue to make great headway. The fire department of this place is on the way to the scene.

THE evening session of the Forestry Congress at Saratoga, on Sept. 27th, began with a paper by J. K. Ward, of Montreal, on "Lumbering in Canada," giving a history of the business here, with a comparison of former and present methods of work.

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Boilers, 4 to 25 Horse-power.
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PULP MADE OF MILL REFUSE.

The Troy, N. Y., *Times* has the following description of the machine which reduces sawdust to pulp:—

"For several months past a machine has been under construction for the manufacture of paper pulp from sawdust and other refuse from saw mills. An experimental machine was completed some time ago. Sawdust, bits of lath, shavings, and refuse known as "driftwood" were converted into pulp in a very short time, the product being equal to any pulp manufactured. The working of the experimental machine was so satisfactory that the inventor found no difficulty in interesting others in the invention. The inventor having completed his machine, made pulp with it to his satisfaction the first time it was tried. The machine is cylindrical in shape and stands on the end. It is 14 feet and 4 inches in height and 6 feet and 2 inches in diameter in the clear. The gearing is on top of the cylinder. The sawdust is placed inside the cylinder—1,600 pounds being the charge—and it is reduced to pulp by rollers travelling around the inner surface of the cylinder, the principle being the same as a wagon rolling over a plank road or the chewing of a piece of wood. These rollers are two hundred in number and attached to the shaft hang on to what is known as a step at the top of the machine, the rollers, shafts, etc., making a total of 20,600 pounds hanging from the step. This apparatus presents a novelty in mechanism, the like of which was never seen before. The entire machine weighs 68,200 pounds; 15-horse power will operate the machine perfectly, and the steam pressure required is from 60 to 80 pounds. About three hours's time will convert a charge of 1,600 pounds of sawdust into pulp, the product being 1,200 pounds. A *Times* representative was present when the machine was in operation, and examined the pulp after having been taken from the machine. It showed a fine, long fibre, and a person could hardly believe, without witnessing the operation, that it had been made from sawdust. The patentee has an apparatus for bleaching the pulp. The product is cleansed automatically as it leaves the machine and is carried direct to the bleacher, where it is rendered as white as snow at an expense not exceeding 50 cents per ton. The invention will work a revolution in paper manufacture. His experiments show that a fine quality of letter paper, as well as book, news, and wrapping stock can be made from the products of the machine direct, thus doing away with the expense of beating engine and other ponderous machinery common to paper mills. It has already produced writing paper in a variety of shades, as well as all other grades capable of being manufactured from rags, jute, straw, or any other material, and his productions are in every way equal. As the raw material can be had for the carting, the manufacture of paper from sawdust pulp effects a wonderful saving."

STRENGTH OF MATERIALS.

With heavy timbers in positions where absolute strength is the primary motive, it often happens that it is optional with the builder whether he put in a single timber of one piece or a number of pieces the aggregate of which would be as large as the single timber, the great question being whether four pieces one foot square will bear a greater or less weight than one solid stick four feet square, each being of the same variety of wood and alike in all other respects.

Before a question of this kind can be answered in a manner to suit all contingencies, it becomes very important that the nature of the strain be fully understood. If the slight movement of the ends incident to the bowed condition be admissible, why it is reasonable to suppose that the four pieces would bend more without breaking, inasmuch as the moment a piece of timber is subjected to any influence causing it to assume any shape than the original, the molecular construction and cellular combination it disturbed; hence if we bend, forcibly, the timber four foot square a fraction out of line, the grains as the lower side are made to expand, at the upper become shorter, and as it is out of the question to contract vegetable matter without disturbance of some kind, this shortening of the upper portion is accomplished either by forcibly tearing one layer from another and allowing each one to bend of itself to accommodate the inequalities, else the entire upper half will be composed of a series of wrinkles and the tension characteristic of the timber permanently and effectually destroyed. At the centre of the timber, the pressure being counterbalanced from above and below, the particles will be found inert; thus we have with the solid timber three forces of an unequal character, all acting in unison to restore an eqilibrium, which, when accomplished, breaks the timber. If we measure the ends of the solid timber while the pressure is in full force, we will find them very uneven, or in the form of steps approaching the centre from below and receding from the centre above, and to do this it is but reasonable to conclude that these grains of wood must have slided past each other, of course materially effecting the power of resistance to pressure the timber oridinarily possessed.

With the four timbers, each one foot in diameter, this difficulty is overcome in exact proportion as we have brought mechanical means to bear and separated these tissues in an artificial manner. Now, if we apply the same pressure, though the four timbers may bend further than the solid stick with the same pressure, at the same time it has not lost its power of restoration and will stand repeated pressure much longer, and by examination we will find the same inequalities apparent at the ends, but more evenly divided, the greatest disparity being at the points of contact with the different sticks.

Again, timber sawn in two and the sides reversed will bear a greater pressure and resist it longer than the solid piece, for the simple reason that when these inequalities of pressure are brought to bear we present a side for expansion containing a greater degree of elasticity, and the portions to contract, or that side within the arc when bent, being nearer the centre of the tree, is more compact and solid, hence the wrinkling tendency is overcome in a measure. We shall have more to say of this at another time, awaiting, as we are, the results of some tests.—*Lumber Trade Journal.*

GREEN AND SEASONED TIMBER.

The question of using properly seasoned lumber is one of importance. The *National Car Builder* publishes the following on the use of seasoned lumber in car building:

"In the building of freight cars, one of the worst things car builders have to contend against is the difficulty of getting dry lumber of the proper dimensions for the various parts. There are few railway companies whose roads do not run through coal regions, that are willing to carry a stock of lumber sufficiently large to admit of its being properly seasoned before being used. Many roads that build cars in comparatively small lots, get their lumber in the open market and do not attempt to season it. The results of using green or half-seasoned lumber are strikingly visible in repair yards, where old cars show the extent of the shrinking of the timber with which they were constructed. In contract work, poorly seasoned stuff is the rule and well seasoned the exception, and the same is true to a certain extent of the road shops, but it is not the shops, as such, but those who run them, who are at fault. Many a so-called contract shop has sent out cars with oak sills almost fresh enough from the stump to sprout if it had not been for a coat of paint, when well seasoned oak that had been cut three or for years was lying in the lumber yard and could have been used without any increase of cost.

In such cases it may be said that the dimensions of the timber may have had something to do with it. Seasoned oak for freight car bolsters has been rejected at contract shops, in one instance at least, because the size was one-fourth of an inch smaller than what was required by the specifications, and green timber used in its stead. In road shops also, when dry stuff on hand varies a trifle from the required dimensions, it is not used because the size does not conform to "our standard." Now, it seems to us that the exact dimensions of car timber are not of such vital importance as some builders are inclined to believe. The variation of one half inch in the thickness of a body bolster, or of one and one-half or two inches in width, is not of much account as compared with the difference between dry and green timber as it effects the service and life of a car. A dry end sill, for example, that is an inch smaller than the specification, is vastly to be preferred to a green one of full size. Considering the losening of bolts, opening of joints and consequent penetration of moisture into the structure, very few car builders will be likely to question this.

In view of the evils to which I have referred, it is a question whether it is not possible to agree upon and establish certain sizes of merchantable car lumber that would be recognized as standard sizes to be used for sills, posts, bolsters, braces, etc., and accepted in all contracts for construction. The results of such a system would not be very apparent perhaps at the start, nor are the advantages that would accrue so obvious as to make some mention of them out of place. The standard sizes once adopted, lumber manufacturers would feel safe in sawing stock to size and holding it to become seasoned, and the general market would be supplied with a larger quantity of seasoned stock from which the roads could draw for car work and thus be relieved from the necessity of carrying very large stocks themselves. So far as such a system would tend to increase the durability of freight cars and lessen the aggregate of repairs, it would be a boon to the roads, and enable builders to turn out more satisfactory work for the same prices. Most of the car building establishments would be willing to keep on hand large quantities of dry lumber if they could be sure of working it off without the waste of cutting it to a diversity of sizes for the same parts of a car. Under such an arrangement it would be possible for a road to get out 500 cars, more or less, at the shortest notice, and built of good material so far as the timber is concerned.

The suggestion of merchantable sizes for car timber may be considered as somewhat visionary by those who are looking for 'standard' freight car, or cars, within the next twelve months. But if such a standard or standards shall reach the climax of consummation within the period named, the event, instead of weakening will strengthen the suggestion."

THE STRUCTURE OF TIMBER TREES.

Regarding the structure of timber trees, Mr. Mr. Percy Russell, a well-known English botanist, writes:—The structure of all bodies, more especially organised bodies, is always marvellous, and it is especially so in regard to vegetable productions. I know that the numerical wonders of the starry heavens, the overwhelming yet matter-of fact stories of the stars whose light has not yet reached us, produce generally more impression on most minds than the less known wonders of the botanical universe, and this really because the anatomy of plants is less popularized than that of the heavens. Let us consider for a moment that wonderful structure, a full-grown oak. First, the substance of all plants consists of cells or vessels, separate or in unison. Cell is added to cell, and vessel to vessel by the natural process of the vitalizing sap, and by means of continual accretion and the exercise of a silent, very gentle, but stupendous energy—if we rightly estimate its final results—the tree is built up, one of the most wonderful of building, and, properly studied, far surpassing in detail the elaboration of any structure due alone to human hands. Technically, the cellular substance of plants may be described as a series of cavities, formed of membrane, and in vacular plants we find the lines of cells at right angles to the vessels. The shape varies, but is, I believe, most generally hexagonal. Each cell has a very thin coat, and these coats or partitions appear endowed with a power at once of secreting and absorbing substances, and in brief, each of these minute chambers may be fairly likened to laboratories wherein are produced with absolute precision, the farina, gums, oils, acids, resin, sugar, and coloring matters which go to constitute the various distinctive parts of the tree. Cork contains very minute cells indeed, as many as 1,200,000 have been counted in a cubic inch, and yet these inconceivable fine points, so to speak, secrete the suberic acid. It is not my purpose here to touch on the controversy as to the way in which these cells are formed originally. They are certainly in plants anterior to the vessels, and these again add cellular substance. The cells become indurated and, indeed, almost obliterated in the wood, and the hardness of the best timber is due in fact to the degree in which these cells have been compressed. Now the fibrous part of plants is composed of vascular substance, and there is reason for believing that in no cases are these threads, but always tubes. Leuwenhock, the famous microscopical observer, calculated that in an oak hole but four inches in diameter, there would be 200,000,000 of these vessels, and in Damory's oak near Blandford, Dorsetshire, there would be in one section of the trunk, which was when cut down, eighty-four feet in circumference, no fewer than 1,441,200,000,000 of these vessels. To bring the matter home to the understanding, the vessels in one foot length of this gigantic oak, if extended end to end, would stretch away through the stellar universe for 240,000,000 of miles!"

Wooden Houses for the Congo.

SEVERAL hundred small frame houses are now building in Belgium for use at Vivi and other stations established by Stanley along the Congo. As Stanley possessed no facilities for taking lumber, his European assistants were compelled to live in tents or huts, and the discomfort of living in that way added largely to the sick list. The International Association is building at Boma, ninety miles above the mouth of Congo, a sanitarium, to which it proposes to send its invalid agents for treatment. Better facilities for preserving health and caring for the sick are among the innovations to be introduced on the Congo.

Forest Fires in Michigan.

DETROIT, Sept. 15.—Forest fires are raging again in the townships of Kimbal, Fort Gratiot, and Port Huron, Huron county. In the latter they are within sight of the city of Port Huron. No buildings are reported burned as yet.

LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on Sept. 1st, 1883 and 1884, and also the Consumption for the month of Aug. 1883 and 1884:—

	Stock, Sept. 1st. 1883.	*Stock, Sept. 1st. 1884.*	*Consumption for the month of Aug., 1883.*	*Consumption for the month of Aug., 1884.*
Quebec Square Pine	485,000 ft.	424,000 ft.	449,000 ft.	309,000 ft.
" Waney Board	449,000 "	516,000 "		
St. John Pine	12,000 "	19,000 "	8,000 "	3,000 "
Other Ports Pine	62,000 "	69,000 "	45,000 "	12,000 "
Red Pine	54,000 "	66,000 "	8,000 "	4,000 "
Pitch Pine, hewn	358,000 "	646,000 "	251,000 "	105,000 "
" Sawn	489,000 "	477,000 "	299,000 "	129,000 "
Planks	70,000 "	85,000 "	30,000 "	12,000 "
Dantzic, &c., Fir	110,000 "	50,000 "	9,000 "	12,000 "
Sweden and Norway Fir	17,000 "	67,000 "	0,000 "	0,000 "
Oak, Canadian and American	351,000 "	357,000 "	130,000 "	108,000 "
" Planks	199,000 "	211,000 "	61,000 "	119,000 "
" Baltic	14,000 "	9,000 "	5,000 "	3,000 "
Elm	39,000 "	44,000 "	20,000 "	21,000 "
Ash	25,000 "	43,000 "	13,000 "	7,000 "
Birch	83,000 "	69,000 "	53,000 "	51,000 "
East India Teak	45,000 "	23,000 "	7,000 "	1,000 "
Greenheart	105,000 "	54,000 "	29,000 "	15,000 "
N. B. & N. S. Spruce Deals	14,639 stds.	22,421 stds.	12,610 stds.	9,365 stds.
" Pine	335 "	1,100 "		
Quebec Pine & Spruce Deals	7,090 "	7,895 "	4,280 "	2,596 "
Baltic Red Deals, &c.	4,312 "	3,507 "	1,630 "	704 "
Baltic Boards	185 "	50 "	145 "	20 "
" prepared Flooring	3,829 "	2,312 "	507 "	714 "

BUILDING TRADE IN ENGLAND.

Over-production of tenant houses is what now seems to trouble the writers in England. The *Timber Trades Journal* says in relation thereto :—The aspect of the building trade as it now presents itself is not of the satisfactory kind that we should like to witness, and the question of what will be the ultimate result of all the over-building that is now going on is already becoming one for serious consideration. The reports all tally in giving an immense increase of tenantless houses each succeeding season, and landed property for which capitalists hung for so long, as affording them a certain field for investment, is rapidly lossing its value, and house property, instead of offering good interest on the money expended, has become anything but safe security. In the metropolitan suburbs the over-building has reached a very critical stage, and what to do with all the houses not inhabited, and for which there is evidently no demand, it is by no means easy to determine. In the city of London things are little better, whole suits of offices of modern construction being unoccupied, and the number to let in the various commercial thoroughfares, Queen Victoria and Cannon streets especially, are something to cause very grave reflections as to the possibility of a very serious collapse to this branch of trade.

THE SHIPBUIDING TRADE ON THE WEAR.

The very small demand for manufactured and unmanufactured timber has been keenly felt by local merchants for the last twelve months, and the present revival, although exceedingly poor compared to the work usually turned out on the Wear, will be hailed with considerable satisfaction, especially by those merchants who make a speciality of shipbuilding wood goods. On the Wear the prospects of shipbuilding have somewhat improved. Three of the leading yards, Messrs. James Laing & Sons, Messrs. W. Doxford & Sons, and Messrs. R. Thompson & Sons, are fairly busy, and in these instances, although the press of work is not so great, the contracts are sufficiently important to admit of a large number of men being engaged. Messrs. Short Bros., who have been doing very little lately, have secured an order for a large steamer, the construction of which will be proceeded with at once. A rumour is current that this boat is on speculation, but we cannot say whether the report is correct. At least three firms on the river that have been almost at a standstill for some time are now about to lay down keels, and there is some hope that one or two other firms will be in a position to set their frame furnaces going shortly.—*Timber Trades Journal.*

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c, measured and culled to date :—

	1882.	1883.	1884.
Waney White Pine..	1,933,078	2,222,271	1,726,409
White Pine.....	6,524,244	4,829,897	3,029,783
Red Pine.....	1,118,533	350,326	278,641
Oak.....	1,003,949	1,428,630	626,550
Elm.....	562,822	302,526	644,073
Ash.....	211,994	222,198	377,105
Basswood	1,273	2,244	3,992
Butternut.....	2,585	1,028	1,121
Tamarac.....	8,234	5,036	18,730
Birch & Maple.....	263,812	138,766	195,175
Masts & Bowsprits...	33pcs	—pcs	—pcs
Spars.....	51 pcs	— pcs	41 pcs
Std. Staves.....	310.0.1.3	509.5.2.10	38.1.2.25
W. I. Staves.....	962.7.1.8	449.1.2.9	78.0.0.2
Brl. Staves.....	42.0.2.3	87.1.1.27	0.6.2.13

JAMES PATTON,
Supervisor of Cullers

Quebec, Sept. 12.

Fire at Orillia.

ORILLIA, Sept. 19.—At 11.30 last night a fire broke out in P. Madden's planing mill, which, despite the efforts of a number of citizens, soon enveloped the whole building in flames. A dwelling house adjoining next caught on fire, and from there it spread to the old lumber mill belonging to Andrew Tait, formerly the property of the Floss Lumbering Company, and in about half an hour $8,000 worth of property was swept away. Mr. Tait's loss is estimated at about $4,000; insurance, $2,000. Mr. Madden's loss is about $4,000; insurance not known.

Chips.

THE Eagle furniture factory in Baltimore was burned September 11th. Loss, $100,000.

THE Big Mill at Deseronto, recently cut 2,633 logs in one day.

MR. JAMES H. TOTMAN, superintendent of the Big Mill, Deseronto, has invented a machine for sharpening circular saws.

A SHINGLE mill belonging to Mr. J. W. Taylor, Dummer, Ont., was burned on Sept. 14. Loss, $600; insurance, $400.

JOHN THURMAN, an employee in Connor's mill, Indianapolis, Ind., fell against the circular, September 3, and his body was cut in two.

AFTER the returns are all in, the losses by fire at Cleveland foot up 50,000,000 feet of lumber and 25,000,000 shingles.

THE capital of the Western Lumber Company, at Manistique, Mich., has been increased to $1,000,000.

IT is announced by a Tawas paper that the logs to be held over at that point by one firm for next season's sawing amounts to 25,000,000 feet.

A GANG of men at Tonawanda recently took 681,000 feet of lumber of the barge Boscobel in 7½ hours; at least that is what is reported by the Tonawanda papers.

A SAW mill belonging to D. W. Small at Cocolala, near Rathdrum, W. T., was burned together with 1,000,000 feet of lumber. The fire is supposed to have been incendiary.

FIRE destroyed poplar and walnut lumber, valued at $35,000, belonging to the Indiana Lumber Company in their yards at Nashville, Tenn., September 10. Insurance $22,500.

MR. JAMES MCLAREN, of Buckingham, purchased from Mr. McAllister, of Pembroke, extensive tracts of timber limits. The price paid is said to be in the vicinity of $300,000.

T. E. & A. CRANE, of Oshkosh, Wis., have purchased pine land estimated capable of cutting 25,000,000 to 30,000,000 feet of pine tributary to the Milwaukee, Lake Shore & Western railroad, the timber being on Wolf river.

AT three o'clock, the morning of September 5th, fire was discovered in the planing mill owned by John Roach, Rochester, N. Y. The mill and a quantity of lumber was destroyed. Loss, $9,000, insurance $7,000.

Several Michigan saw mills are preparing fine Norway logs for shipment by rail to New York, and thence to England by steamer. They will be used for rebuilding old docks and quays.

An extensive forest fire in Talbot county, Md., after raging two days and nights, had burned over thousands of acres of woodland. The fire originated in the pine forest owned by Eugene Ross, at Medford's Wharf.

MR. W. F. FOWLER has secured the contract from the various lumbermen interested, to drive about 3,000,000 feet of logs, stranded at various points along the River between Woodstock and Grand Falls, says the St. John *Telegraph.*

NEARLY two million dollars' worth of lumber has been destroyed by fire during the past week. This should increase the demand somewhat. Much of this destruction occurred at points to which the Saginaw river is tributary. *Lumberman's Gazette.*

THE box and woodenware factory of Waspe & Loslier, on Clyde street, London, was destroyed by fire on September 11th. Loss on building, $200, no insurance; loss on stock, $800, fully covered by insurance in the Waterloo Mutual.

A PERTH journal states that Mr. Peter McLaren received a cheque for $120,000 in full of the judgment obtained by him against the Canada Central, now the C. P. R., for lumber burned in his yard at Carleton Place—$100,000 for damages and $20,000 for costs.

MR. THOMAS PIGDEN, says the Deseronto *Tribune*, one of the foremen of the Big Mill, has made many changes during the season for the purpose of more speedily and effectively getting clear of the refuse, firewood, etc., and his department may well be considered a model one in that respect. By a lavish use of the hose he keeps down the dust and thus makes that section cool and comfortable for both men and horses.

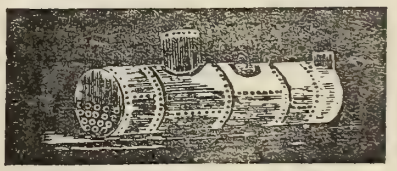
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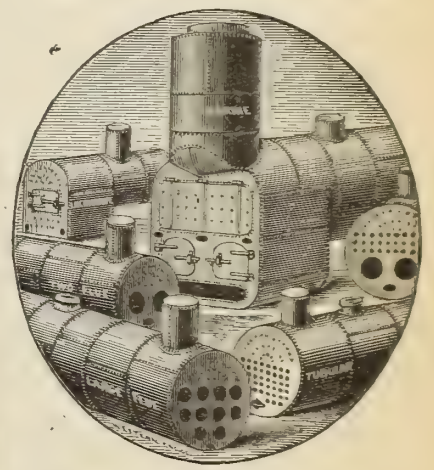
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Market Reports.

TORONTO.

From Our Own Correspondent.

SEPT. 24.—Our citizens have had their attention diverted from their legitimate business during the last two weeks. Industrial exhibition on the brain has affected most of our population more or less, so that our yard men and wood workers with many other branches of trade, have been nearly idle during that time, and I can say but little to interest your readers. There is said to be considerable cutting on prices for small bills amongst our retailers. I cannot vouch for the truth of many of the reports as to prices. I have heard, however, of short bill stuff with boards for covering in, and material for working into flooring, having been furnished as low as $10.50 per M all over. If this is correct, and I have it from what I consider a reliable source, I leave your readers to judge what must have been the figures paid at the mill. This paring down so low on small orders is a foolish policy, fair and remunerative prices might as well be obtained as not, and all dealers sell quite as much lumber.

Over our docks considerable lumber is moving off, and more of the coarse box than usual. The principal shippers operating at present are Messrs. Christie, Kerr & Co., S. C. Kanady & Co. and Messrs. Donogh & Oliver, the first named firm are shipping largely just now. Freights to Oswego remain at $1.00 per M.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
Scantling and joist, up to 16 ft	13 50
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 00
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	20 00
" " " 32 ft	21 00
" " " 34 ft	22 50@22 50
" " " 36 ft	24 00
" " " 38 ft	27 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	24 00
" boards "	20 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 00
Three uppers, Am. inspection	35 00@40 00

B. M.

1½-inch flooring, dressed	30 00
1½ " " rough	16 00
1¼ " " dressed	25 00
1¼ " " undressed	15 00@15 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ₱ M	2 90
Sawn Lath	2 75

MONTREAL.

From Our Own Correspondent.

SEPT. 25.—Usually after the exhibition here a pretty fair trade has been done in lumber; this year, however, has, contrary to expectation, been an exception, as merchants here say that had it not been for advertisements in the papers they would hardly have known that there was an exhibition in the city, as it had no effect on business, and trade still keeps very dull as far as our local market is concerned. General business, however, has been rather better but no change has taken place in quotation, which on the whole are well maintained for limited lots. We still quote ex yard as under:

Pine, 1st quality, ₱ M	$35 00@40 00
P ne, 2nd " ₱ M	22 00@24 00
Pine, shipping culls, ₱ M	14 00@16 00
Pine, 4th quality deals, ₱ M	10 00@12 00
Pine, mill culls, ₱ M	7 00@ 9 00
Spruce, ₱ M	10 00@13 00
Hemlock, ₱ M	9 00@10 00
Ash, run of log culls out, ₱ M	15 00@18 00
Bass, " " ₱ M	15 00@20 00
Oak, ₱ M	40 00@50 00
Walnut ₱ M	60 00 100 00
Cherry, ₱ M	60 00@80 00
Butternut, ₱ M	25 00@35 00
Birch, ₱ M	20 00@25 00
Hard Maple, ₱ M	25 00@30 00
Lath, ₱ M	1 75@ 2 00
Shingles, 1st, ₱ M	3 00@ 0 00
Shingles, 2nd, ₱ M	2 50@ 0 00

SHIPMENTS.

Shipping has been fairly active for the past two weeks, and the demand for tonnage has been good at the following rates: To Glasgow, 40s.; Avonmouth 40s. to 45s.; Liverpool, 40s. to 45s.; to the River Platte, $12.50 to $13.00. The latest charter to the Platte was the ship Republic, 843 tons, at $12.50, for Buenos Ayres direct. All the lumber on hand here is well provided with tonnage. The following are the shipments for the past two weeks: Bk. Felicia, for Buenos Ayres, 317,956 feet white pine boards; SS. Erl Ling, London, 7,833 pcs. deals; SS. Montreal, Liverpool, 4,893 pcs. deals, 5,830 pcs. boards, 6,281 sidings; SS. Cynthia, Glasgow, 6,000 ft. lumber; SS. Benona, Dublin, 320 bbl. shooks; Bk. Alexander Keith, Buenos Ayres, 524,196 ft. pine lumber; Bk. Trity Smith, Buenos Ayres, 358,115 ft. pine lumber; SS. Bristol, Bristol, 342 pcs. deals; SS. Lake Huron, Liverpool, 6,100 pcs. deals; Bk. Oregon, Hull, 212 standards white pine deals; SS. Cladow, London, 17,211 pcs. pine deals, 1,372 ends; SS. Vancouver, Liverpool, 7,476 pcs. deals; 537 boards and 209 pcs. lumber; SS Castle Eden, Liverpool, 17,570 pcs. pine deals, 410 deal ends and 6,120 boards, also 10,000 ft. of lumber; Bk. Gaspe, River Platte, 267,000 ft. white pine.

CORDWOOD.

Trade is getting a little brisker as the season advances and prices keep steady, the supply at the wharves both rail and boat is good. We quote at the wharves ex cartage as follows:

Long Maple	$ 6 00
Long Birch	5 50
Long Beech	5 00
Tamarack	4 50

LIVERPOOL MARKETS.

Our latest report from Liverpool says that there has been a fair consumption for Canadian goods, but says, at the same time, that shippers on this side would act wisely in restricting their shipments to that port as much as possible, as merchants seem determined not to increase their stocks of 2nd class and inferior goods, consequently goods of other than prime quality are difficult to sell, and very low prices have to be submitted to. Private sales of spruce deals from St. John, N. B., at £6 per standard, auction sales of the same averaged £6 2s. 6d.

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ₱ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	45 00@50 00
Pine, good box	22 00@33 00
Pine, common box	13 00@15 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 16@00 21
Pine, 10-in. boards, 16 ft., ₱ M	28 00@32 00
Pine, 12-in. boards, 16 ft	28 00@32 00
Pine, 12-in. boards, 13 ft	28 00@00 00
Pine, 1¼ in. siding, select	40 00@43 00
Pine, 1¼-in. siding, common	20 00@00 00
Pine, 1-in. siding, select	42 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Black walnut, gook, ₱ M	100 @120 00
Black walnut, ⅞ inch	80 00@90 00
Black walnut, ¾ inch	00 00@85 00
Scaymore, 1-inch	30 00@32 00
Scaymore, ⅞-inch	23 00@25 00
White wood, 1-inch and thicker	38 00@43 00
White wood, ⅞-inch	30 00@32 00
Ash, good, ₱ M	40 00@43 00
Ash, second quality, ₱ M	25 00@30 00
Cherry, good, ₱ M	60 00@85 00
Cherry, common, ₱ M	25 00@30 00
Oak, good, ₱ M	40 00@43 00
Oak, second quality, ₱ M	20 00@25 00
Basswood, ₱ M	25 00@30 00
Hickory, ₱ M	40 00@40 00
Maple, Canada, ₱ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ₱ M	38 00@40 00
Shingles, shaved, pine, ₱ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	4 50@ 4 50
" clear, "	0 00@ 3 00
" cedar, mixed	0 00@ 3 30
" cedar, XXX	0 00@ 2 00
" hemlock	0 00@ 2 00
Lath, hemlock, ₱ M	0 00@ 2 00
Lath, spruce, "	0 00@ 2 25

CHICAGO.

AT THE DOCKS.

The *Northwestern Lumberman* of Sept. 20th says:—The number of cargoes arrived in port for the week ended Wednesday night was 175, as compared to 178 the week previous, so that although the week has been called a dull one as regards both arrivals in port and offerings on the market, business is by no means at a stand still.

Prices, on the whole, are very steady, considering the dragging condition of the market and the slow state of trade in the yards. The commission men say that this is owing to the fact that prices are as low as they can possibly be, unless there should be an utter break down and a general slaughter of stocks for the sake of realizing—a sort of neck-or-nothing market, that could only come of the financial collapse of the holders, which is not likely. If the mill men only take counsel of the overcrowded state of the general market, and limit their input of logs next winter, and their output of lumber from now onward, relief would, to some degree, be realized by next spring.

An increasingly large proportion of good inch lumber is arriving. Thick and wide lumber, classed as No. 1, is not selling are readily, nor for relatively as good prices as inch lumber or strips. The latter moves off rapidly, and brings good prices ranging from $15 to $20.

Shingles are not glutting the market as they did earlier in the season, and the low range of prices is fairly maintained.

Quotations are as follows:—

Piece stuff, green	$ 8 25@ 8 50
Long timber, green	10 00@11 50
Coarse common	9 00@ 9 50
Boards and strips—No. 2 green	9 50@11 00
Boards and strips Medium, green	11 00@15 00
Boards No. 1, green	15 00@18 00
High grade	18 00@24 00
Shingles, standard	1 55@ 1 80
Shingles, Choice	1 80@ 1 90
Shingles, extra	1 90@ 2 20
Shingles, clear	2 80
Shingles, cedar	1 50@ 2 00
Lath	1 25@ 1 40

LAKE FREIGHTS.

Grand Haven by steam	$ 1 12½
" " " sail	1 25
Muskegon by steam	1 12½
" " sail	1 25
Whitehall	1 37½
Ludington	1 50
Manistee	1 62½
Menominee dry	1 50
" green	1 62½
Oconto	1 62½
Cheboygan	1 50
Alpena	1 75
Bay City	2 00
Tawas	0 00
Frankfort	1 62½

AT THE YARDS.

Trade is jogging along at a fair gate, so far as shipments are concerned, though there is nothing like the September rush that was expected. There are plenty of dealers that say that the trade is positively dull; others say that it is fair; a few claim that there has been a slight increase of orders during the past week.

Receipts of lumber, shingles, etc., from Jan. 1st to Sept. 1st as reported from the Lumberman's Exchange:—

	RECEIPTS. Lumber.	Shingles.
1884	53,988,000	27,590,000
1883	72,451,000	52,830,000

FROM JANUARY 1, 1884, TO SEPT. 18, 1884, INCLUSIVE.

	RECEIPTS. Lumber.	Shingles.
1884	1,287,339,000	628,278,000
1883	1,304,126,000	846,355,000
Decrease	16,787,000	218,077,000

LAKE RECEIPTS FROM JAN. 1 TO SEPT. 17.

Lumber	1,192,800,000
Shingles	603,665,000
Lath	45,175,000
Posts	2,200,016
Railroad ties	697,964
Wood, cords	19,958
Bark, cords	20,532
Slabs, cords	27,846
Telegraph poles	122,890
Piles	500
Spars	12

STOCK ON HAND SEPT. 1.

	1884.	1883.	1882.
Lumber & timber	607,163,629	576,384,049	580,890,533
Shingles	352,022,268	371,285,690	226,806,750
Lath	59,225,900	59,941,215	42,996,432
Pickets	1,305,699	1,888,036	2,678,476
Cedar posts	483,069	473,402	218,309

BOSTON.

The *Journal of Commerce* of Sept. 20 says: General trade is moving along rather slowly, but there are some signs of business starting up soon. Spruce is moving moderately, but at weak prices. White pine is moving quite well and the best grades are held quite firmly. Southern pine is moving slightly better but at low prices. Walnut moves fairly well for choice descriptions. Ash is dull and low. Cherry and oak sell slowly at present. Whitewood remains very low.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

TONAWANDA.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$45 00@46 00
Common	15 00@17 00
Culls	12 00@13 00

OSWEGO, N.Y.

From Our Own Correspondent.

No change in prices or demand. Trade is very dull indeed and the prospect are that we shall not have the usual brisk trade we usually have during the fall months.

1½, 1½, 2 & thicker uppers	$42 00@46 00
" " " " pickings	32 00@35 00
" " " " cutting up	22 00@25 00
" " " " cutting up peckings	
peckings and better	32 00@34 00
1 inch selected sidings	28 00@30 00
1¼ " " "	30 00@35 00
1 & 1¼ in. box	12 00@14 00
" " sidings, dressing and better	22 00@25 00
1x10 in. 13 ft, dressings and better	20 00@25 00
" " shipping culls	14 00@15 00
" 14 & 16 ft. dressings and better	20 00@23 00
1x10 in. 14 & 16 ft. ship culls	14 00@15 00
1x12 " " " "	14 00@15 00
" " " dressings and better	20 00@23 00
1¼ in. strips selected	23 00@25 00
1x" " dressings	16 00@17 00
" " culls	10 00@13 00
Ash.	
1st & 2nd, 1 to 4 inch	18 00@22 00
Culls " "	10 00@12 00
Basswood.	
1st & 2nd, 1 & 1¼ inch	18 00@20 00
Culls " "	10 00@11 00
Shingles.	
XXX Pine	3 25@ 3 25
XX "	1 90@ 2 10
XXX Cedar	3 25@ 3 25
XX "	1 50@ 2 00
Lath 1½ No. 1	2 00@ 0 00
" No. 2	1 75@ 0 00

BUFFALO.

We quote cargo lots:—

Uppers	$45 00@46 00
Common	17 00@18 50
Culls	12 50@13 00

LIVERPOOL.

The *Timber Trades Journal* of Sept. 13th says:—The number of vessels arriving with timber cargoes still keeps within moderate bounds, these being chiefly from Nova Scotia or New Brunswick with spruce deals, or from Norway with flooring. This moderation in imports is one of the few cheering aspects of the trade at present, and it is most devoutly to be hoped that it may continue so for some time to come, as it is only in this direction that we can look for relief from the depressed condition of the trade.

It is evidently hopeless to look for any improvement in the demand from the manufacturing district where the state of trade is reported to be still as listless and inactive as ever, and it is only by a large curtailment of imports that the heavy stocks on hand can now be reduced to moderate limits by the time the next import season arrives.

There have not been any public sales during the past week, but one is announced.

LONDON.

The *Timber Trades Journal* of Sept. 13th, in its account of Messrs. Churchill & Sim's sale, says:—Most of the pine submitted without reserve on Wednesday were oddments, and the parcel ex Lizzie Perry, from Quebec, lots 84 to 93 in the sale, had nothing particular to recommend it, being rough and not dry, hence the prices obtained were quite as good as could be expected. The two lots of 13 feet ex Juliet, 3x11 in., also Quebec at £8 15s. and £9, somewhat coarse but fairly dry, were undoubtedly cheap, and we question if the lucky purchaser could get any more at the price should he require them. The Rota parcel, of 7 to 10 in. 12 and 13 feet, described as bright, judging from appearance would pass very well for dry floated, were decided bargains at the prices paid for them and must leave a considerable loss on the original cost, having been held over since last year. The uncertainty appertaining to public sale values at the present time was never better exemplified than on the present occasion. Some St. John broad spruce at one period of the sale fetched £5 10s. that subsequently realized £6 for a somewhat similar lot (from Baddick), 9 in. and 8 in. deals from this port going lower than the St. John; the ends from the latter port, however, went better this time than at the sale of August 13th by 30s. a standard, which is another variation remarkable in such low-priced goods.

The 1st quality white planks in the Lockwood's cargo realized a capital price at £10. These were NP 1 mark, and a lot of 2nds at £8 15s. also were a pound better than precisely similarly described goods realized at the sale of this firm a fortnight ago. The unsorted St.

John's spruce ex Hudson called forth some spirited bidding, but it is questionable if the deals, although a very poor lot of stuff, fetched their first cost. Prices of low-class stuff generally seemed of this non-paying character, but with the specially low freights that have been paid this season it is just possible that even on the present prices the expenses are covered, but that any margin is left it is hardly possible to conceive under the most favorable circumstances.

Some of the reserved lots in Wednesday's sale were bid for, and several sold, amongst which were the 2nd spruce planks, ex Jarlen, from Quebec, 9 to 11 feet, realizing £7 10s., and some 3x8, 12 feet, £7; these prices, all things considered, seem fair enough. The cargo was a good one, and with other descriptions of white-wood going at all sorts of cheap figures it is illustrative of the esteem choice Quebec wood is held in when we find packing case makers paying the same price for it as they do for Petersburg of similar quality: prices quoted in the open market for similar goods are £7 15s. to £8, which we believe there is no difficulty in securing. The Quebec oak, ex Oren, without reserve, fetched for the large-dimensioned logs £7 and £7 5s. a load, a tall price, especially when we consider that they have been two seasons in the docks. It was rumoured that these were bought in, but as they were put up without reserve we can hardly understand that can be so. At any rate, we record the sale; the smaller logs fetching a uniform price of £6 10s.; if the one parcel was brought in, the whole of it must have been, and that is hardly likely.

At Thursday's sale values throughout went low for the parcels disposed of; but as we have observed if values did not harden at all they certainly betrayed no further signs of weakness. The birch timber ex Hudson, from St. John, was cheap at the price, but it was not a very attractive parcel, and so with regard to the Odessa wainscot, one buyer took the whole parcel, 15 lots, at 4s. 12 ft. and upwards, and and 37s. 6d. for under that length; a couple of lots of the latter, however, went up to 42s. 6d., the same buyer being evidently determined to secure them. This was undoubtedly a very low crown logs.

The pitch pine planks ex Siberia, from Mobile, went slightly better than in the sale of the 27th, 4x12, which on that occasion went at £9, this time fetched £9 15s., and so by this we might describe the market as rather better the last week or two, were it not that other goods went proportionately lower. Uleaborg, for instance, 4 9, that fetched £8 10s. last month's sale, on this occasion went at £7 15s., and 2½x7, which in August realized £6 10s. to £7, in Thursday's sale sold at first-named price.

One with another we may say prices are steady, but it is entirely due to the comparatively small proportion of the stocks which comes under the hammer that keeps them so; this is pretty well recognized throughout the trade, and any presumption on this apparent steadiness would not bring about the anticipated result.

GLASGOW.

The *Timber Trades Journal* of Sept. 13, says:—A sale of timber was held at Greenock on Sept. 4, particulars as below. The attendance was fair and about 400 logs were disposed of, also various lots of deals,

There has been a light import during the past week—at Greenock a small cargo of greenheart timber and at Glasgow two cargoes of spruce deals and sundry shipments of oak planks, staves, etc., per steam liners, also an arrival of Quebec deals per steamer,

The total import of deals to Clyde shows a considerable falling off this year compared with corresponding period of previous years, being in round numbers 640,000 pieces this year to date, which is more than 200,000 pieces under previous year, and about 150,000 pieces under 1882. The storage accommodation for deals at Yorhill Wharf, Glasgow, is, however, at present fully occupied, and indeed there are cargoes presently being yarded for which it was with difficulty room could be got, and the passage-ways have had to be encroached on. This to some extent arises from the space available being now more limited than formerly, part of the ground being now taken up for another purpose. The dock authorities are also at present preparing a straight thoroughfare according to original plan, from Queen's Dock to Pointhouse, which cuts up a considerable part of the yard.

The masons' strike still prevents to a large extent the free onward flow of trade or the execution of such orders as are presently in hand. It was observed by one of the members of the school board here at their monthly meeting last week that they had work amounting to £50,000 on hand to be completed by next July, and as the demand for more room this year for scholars was unusually pressing, some means should be used to bring this dispute to a termination, so that the work which is now at a stand still may proceed. The Board school erection being only one item of our building operations going on, the settlement of this strike would no doubt improve the present sluggish position of the market.

AUCTION SALE.

On 4th inst., at Greenock, Messrs. Singleton, Dunn & Co., brokers:—

Quebec waney boardwood (unreserved)—		
46 c. ft. avg. per log	1s. 8d.	p. c. ft.
Quebec yellow pine (unreserved)—		
50 c. ft. avg. per log	1s. 2½d.	"
40 "	1s. 0¾d.	
Quebec yellow pine (superior joisting)—		
35 & 40 c. ft. avg. per log	1s. 2½d.	"
Quebec Red pine—		
40 c. ft. avg. per log	1s. 0¾d.	
35 "	1s. 1¾d.	"
30 to 40 "	11½d to 1s. 0¼d.	"
Quebec birch—		
13½ c. ft. avg. per log	1s. 5d.	"
One log poplar—		
37 c. ft. avg. per log	10½d.	"
Sawn pitch pine timber—		
40 c. ft. avg. per log	1s. 2d.	"
35 "	1s. 1¾d.	"
Pitch pine planks 3 to 6 in. thick—	10¼d. to 10¾d.	"
Quebec 3rd pine deal ends—		
8 ft. 11×3	11d.	"
7 " 11×3	10d.	"
Quebec 4th pine planks—		
14 to 16 ft. 7/20×2	8½d. & 8¾d.	"
Quebec 2nd spruce deals—		
11 ft. 7/8×3	8¼d.	"
Quebec 3rd spruce deals—		
12 ft. 7/11×3	9d.	"
13 to 18 ft. 7/11×3	8¾d.	"
10 ft. 7/18×3	8¾d.	"
9 & 11 ft. 7/18×3	8½d.	"
Quebec 3rd spruce deal ends—		
4 to 8 ft. 9/11×3	7¾d.	"
Bright spruce deals—		
11 & 12 ft. 7/15×3	8½d.	"

AUSTRALIA.

The monthly circular of Lord & Hughes, timber brokers, dated Melbourne, July 26th, says:—

Business in timber and building materials continous in much the same state as as date of our last issue on the 30th ult., quietness being still the prevailing feature in almost all descriptions, which is usually the case at this period of the year.

Offering at auction have been below the usual monthly average. Sales publicly have been principally Oregon deals and timber, ex Howard D. Troop; Scotch flooring, ex Glentilt and Blairgowrie; American lumber, ex Lothair, Hoiden and Leading Wind; Kauri pine, ex Camille and Naiad.

The trade report a falling off in the demand from the yards for consumption, as compared with the previous three months.

Stocks of most descriptions of timber are ample for the next six months at present rate of consumption, but as the banks have reduced the rate of interest on fixed deposits to 3, 4, and 5 per cent. for 3, 6, and 12 months respectively depositors will doubtless seek more profitable investments, and this may cause a more active demand for timber and building materials in in the coming spring.

The arrivals have been Mathias, from Gothenburg, with red deals; Howard D. Troop, from Puget Sound, Minnie Carmichael, from Vancouver Island, with Oregon timber, laths and pickets; Lothair, from New York, Saml. Skolfield, from Boston, with clear pine, white pine shelving, T. and G. Ceiling, spruce deals, spruce flooring, laths, pickets, plaster and slates; Tiverton, Loch Eck, Westmeath Romanoff, Port Darwin, Blairgowrie, Avenger, Fort George, Ilala, Procida, Yarra Yarra, Loch Vennachar, and Glenochil, from Great Britain, with flooring, deals, laths, slates, lead, galvanized iron and cement; Remus, from Antwerp, with cement; Camille, from Kaipara, Naiad, from Mercury Bay, N. Z., with kauri pine; Cheviot, Gabo, Nemesis, Konoowarra, Buninyong Wendouree, Leura, Cahors, City of Adelaide, from Sydney, with cedar, galvanized iron and lead; Adelaide, from Adelaide, with red deals.

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RED DEALS.—Imports: 10,942 pieces from the Baltic, 1,860 from the United Kingdom. The arrivals have been Mathias, from Gothenburg, Avenger, from London, and Adelaide, from Adelaide, the latter being transhipment from the Baltic. On 4th inst. the deals ex Leviathan, were offered at auction, but the trade showing no disposition to purchase they were withdrawn, with exception of a line of 9x3, F W T brand, which was sold at 4⅞d. to 4⅝d. The only other public sales have been parcel ex Adelaide, and small lines ex Java. We understand the cargo ex Mathais has been sold privately at a price not transpired.

SPRUCE DEALS.—Imports; 1,729 pieces. This parcel arrived in Saml. Skolfield, from Boston, and is advertised for sale on the 8th proximo. There have been no sales at auction during the past four weeks.

OREGON TIMBER.—Imports: 1,901,710 feet super. The arrivals have been, Howard D. Troop, from Puget Sound, and Minnie Carmichael, from Vancouver Island. The cargo ex Howard D. Troop was offered at auction on 18th inst., the greater portion being sold, prices ranging from £6 15s. to £6 5s. The balance of cargo is advertised for sale on the 29th inst. The Minnie Carmichael has just arrived.

LUMBER.—Imports: Clear pine, 145,870 feet super; white pine shelving, 302,872 feet super; T. and G. ceiling, 51,511 feet super. The arrivals have been Lothair, from New York, and Saml. Skolfield, from Boston. Sales by auction have been, shipments ex Lothair, and several lines ex Hoiden, Leading Wind, W. H. Besse, and Kylemore. The parcel ex Saml. Skolfield is advertised for sale on the 8th proximo.

PITCH PINE.—Imports: Nil.

REDWOOD.—Imports: Nil. The balance of cargo ex Kylemore was offered at auction on 4th inst, but only a portion of 2-inch was quitted at £10.

FLOORING AND WEATHERBOARDS.—Imports: 864,294 feet lineal from United Kingdom, 25,703 feet lineal from United States. Sales by auction have been of a limited character, being shipments ex Glentilt, Blairgowrie, and Avenger, and small line, ex Kamfjord. Prices realised were as follows:—Red, 6x1⅛, 11s. to 10s. 3d.; 6x⅞, 8s. 6d. to 8s.; 6x¾, 6s.; 6x½, 4s. 7d. to 4s. 6d.; 4-out weatherboards, 6s. 3d.; white, 6x⅞, 7s. 9d. to 7s. 6d.; 6x½, 4s. 8d. to 4s. 6d.; 4-out weatherboards, 6s. 3d. to 6s.

KAURI PINE.—Imports: 458,211 feet super. The arrivals have been Camille, from Kaipara, and Naiad, from Mercury Bay. The cargo ex Camille was sold on the 22nd instant, logs realising 14s. 6d., and flitches 16s. 3d. per 100 feet super, and cargo ex Naiad was offered at auction on 25th instant, when the whole was sold with exception of about 20,000 feet ¾-inch shelving.

CEDAR.—Imports: 426,970 feet super. The arrivals have been heavy; a great portion of which is of indifferent quality, and logs small sized, consequently prices this month are lower.

DOORS.—Imports: Nil.

LATHS AND PICKETS.—Imports: Laths, 9,890 bundles; pickets, 1,936 bundles. Sales at auction have been made of Oregon laths, 4½ ft., at 36s. 6d. to 34s. 6d.; Oregon pickets, 4½ ft., at £8 5s.; Spruce laths, 4½ ft., at 34s.; 4 ft., at 30s.; Baltic red laths, 6 ft., at 46s.; 4½ ft., at 35s.

SLATES.—Imports: 442,729 pieces. The only sale by auction has been shipment ex Lothair, of first American Blue Bango slates, 24x12, realising £14 2s. 6d.; 20x10, £9 15s.

PLASTER.—Imports: 200 barrels. This parcel of Albert Mill Plaster (large barrels) arrived in Saml. Skolfield, and was sold by auction on 18th instant, at 14s. per barrel. There have been no other sales by auction during the month.

CEMENT.—Imports: 11,940 barrels. There is no improvement in the market for cement this month, and the arrivals continue heavy. Knight, Bevan and & Co.'s and Gostling's are quoted at 15s. 6d. to 15s. 3d. Jossen and Co.'s Portland cement has been sold privately at full rates.

GALVANISED IRON.—Imports: 1,765 tons. The market continues quiet, and we hear of no private sales of importance.

PALINGS.—Nil.

EXPLANATION.—Red deals and spruce deals are sold at per foot of 9x3; T. and G. flooring at per 100 feet running; Oregon timber, redwood, clear pine, shelving, ceiling, per 1,000 feet super; kauri pine and cedar logs at per 100 feet super; laths, pickets and slates at per 1,000 pieces.

OUR TRADE WITH FRANCE.

The trade in Canadian woods, which are much appreciated in France, has until now been carried on through English middlemen, so much so that the English word "spruce" has become a recognized term of French carpentry. In some quarters it has been found singular that trade between two countries speaking the same language and united by so many ties should not be direct, the only appreciable use of the middlemen being to draw a percentage on the profits, and the classification of the lumber of commerce by Canadian inspectors being sufficient guarantee to the buyer. However, a new departure seems to have been taken, as during the months of July and August two Canadian barques, the Earl of Shaftesbury, 500 tons, and the St. Louis, 480 tons, have cleared Les Escoumains, with full cargoes of spruce planks, the first bound for La Seyne, near Toulon, and the second for Havre. Mr. T. J. Lamontagne is the consignee in both cases. Three other barques will shortly leave the same port with cargoes for the French market.—*Montreal Star.*

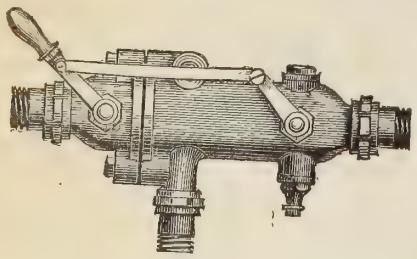
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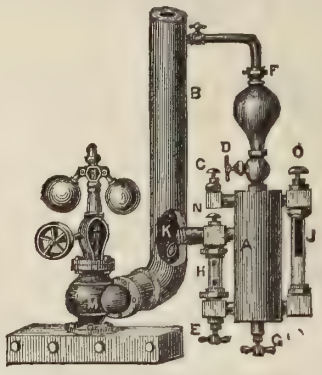
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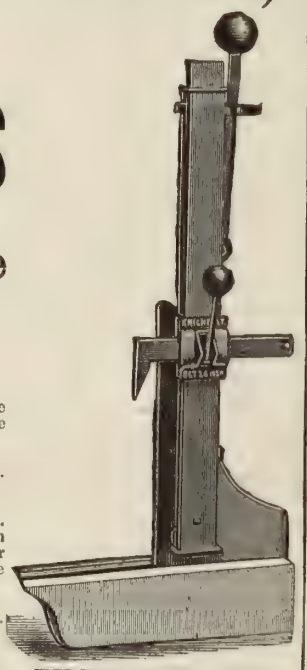
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PETER McLAREN.

BERKLEY, April 20th, 1883.

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Yours truly,
GEO. S. BROWN, JR.

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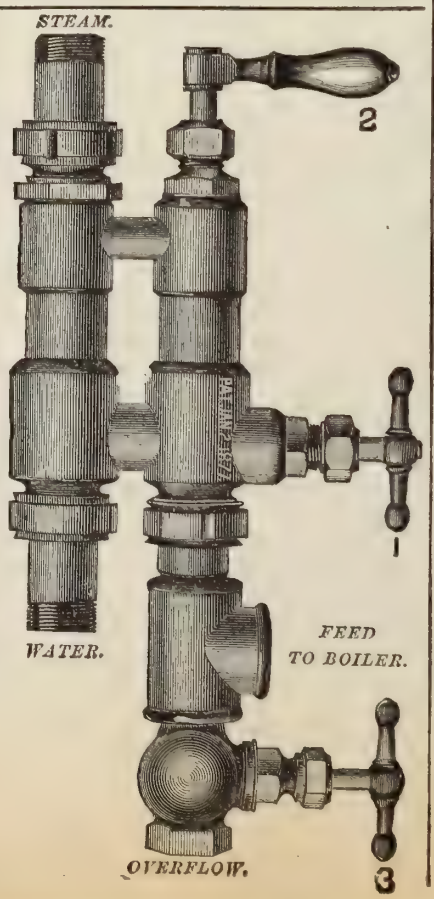
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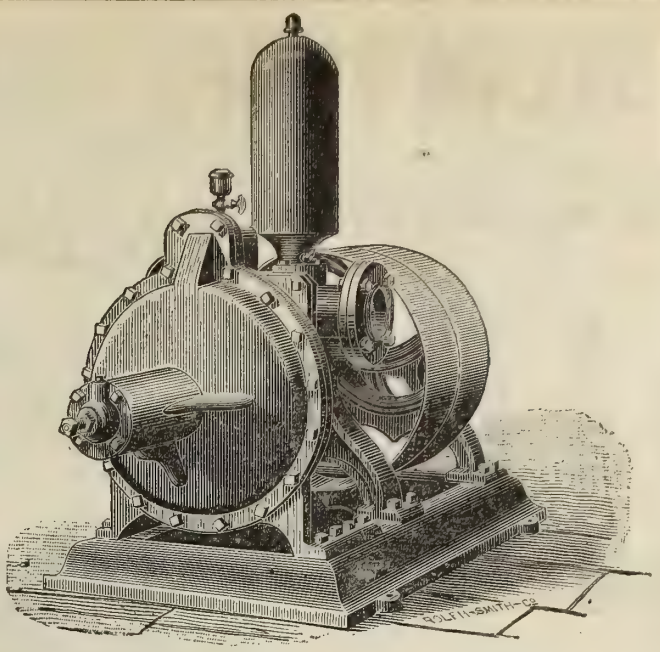
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4	5 "	4 "	250	400	225

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MR. A. NORMAN, WALLATTA, D.T., December 17th, 1883.
DEAR SIR,—I am happy to inform you that the Appliances I got from your Chicago agent have had a most marvellous effect upon my patient who suffered from Sciatica. He could get very little relief from medicine. Shortly after he got your belts he was able to get out of bed, and is now on a visit to his Canadian friends. Send me some more circulars. Yours truly, DR. D. McLACHLAN.

MR. NORMAN, PERTH, ONT., June, 1883.
DEAR SIR,—I have been wearing your Electric Insoles for about six months, and have been greatly benefited by them. I recommend them to all who suffer from Rheumatism. Yours truly, MRS. J. GUTHRIE.

A. NORMAN, ESQ., OTTAWA, September 3rd, 1883.
DEAR SIR,—I have experienced considerable benefit from your Appliances. I feel stronger and better every way. Yours truly, R. E. HALLIBURTON.

A. NORMAN, ESQ., PETERBOROUGH, October 15th, 1884.
DEAR SIR,—Soon after I commenced to use your Electric Appliances they opened my bowels, cured my cough and cold, relieved my head, and considerably relieved my catarrh in consequence. The discharges from my head and chest are now easy, and I feel altogether better. My digestion has improved, my stomach is less sour and windy, and I am less troubled with lascivious and vivid dreams. I had previously tried almost all the advertised patent medicines without deriving any good. Yours truly, J. GREEN.

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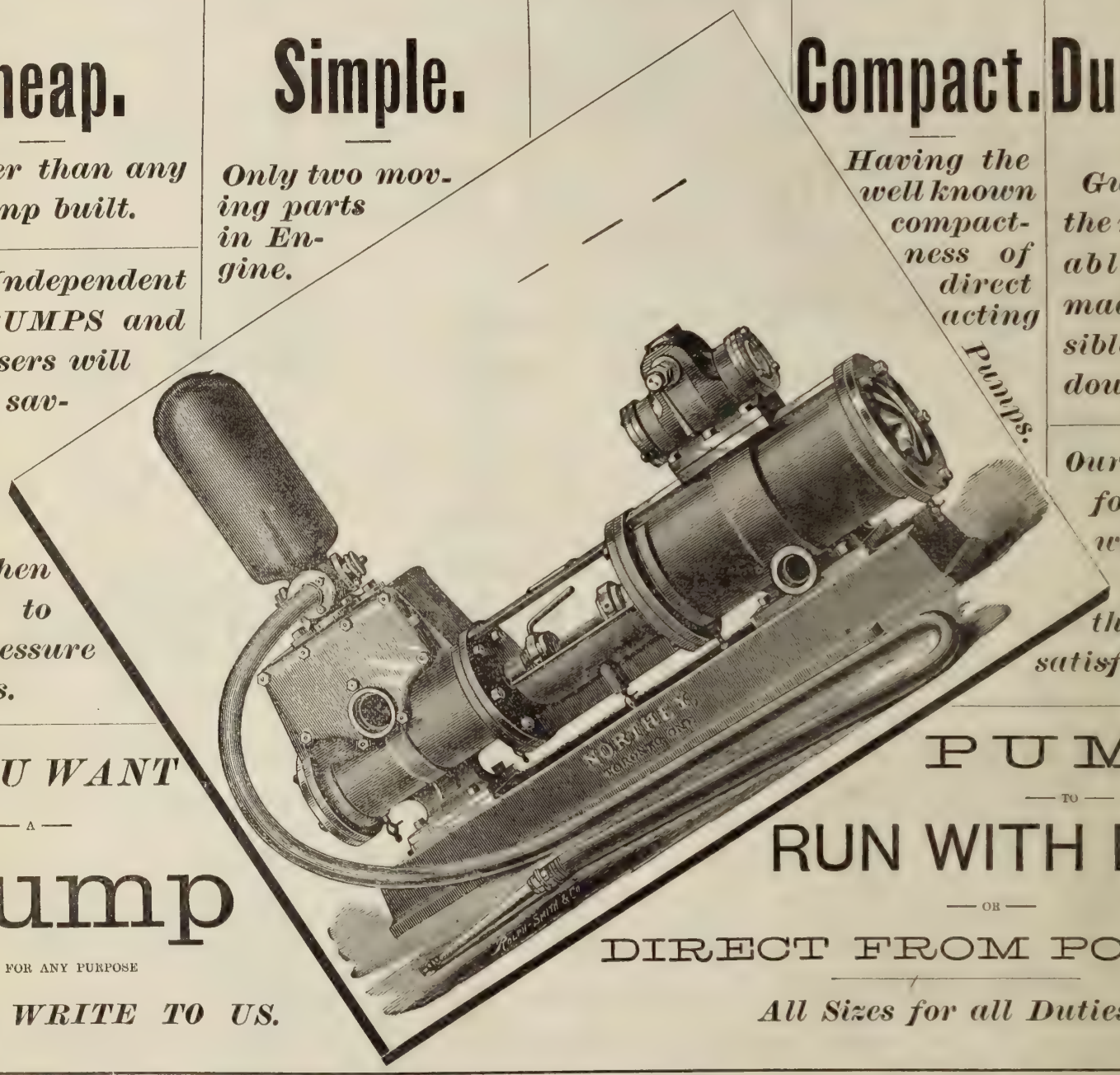
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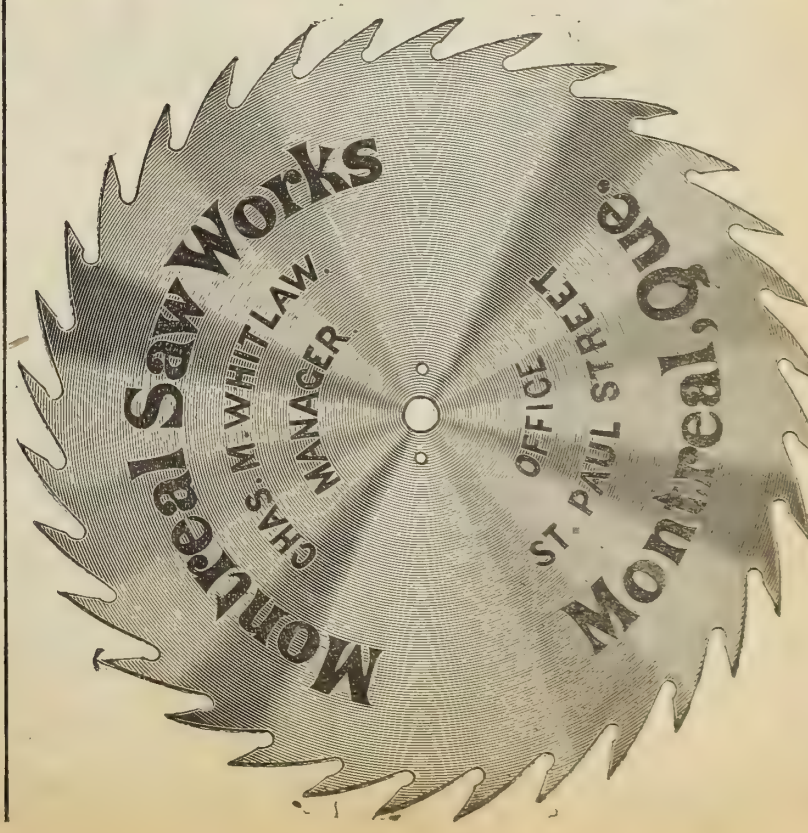
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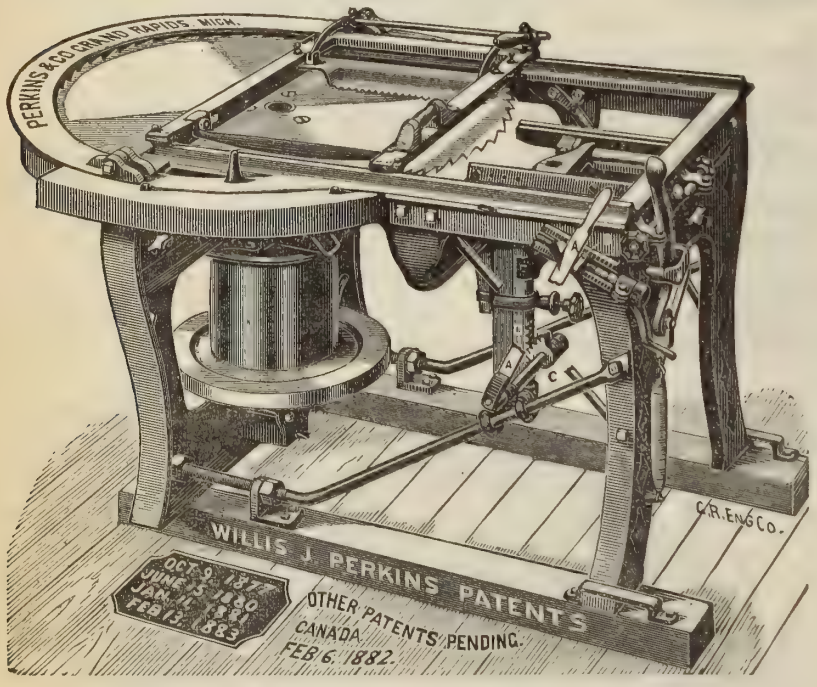
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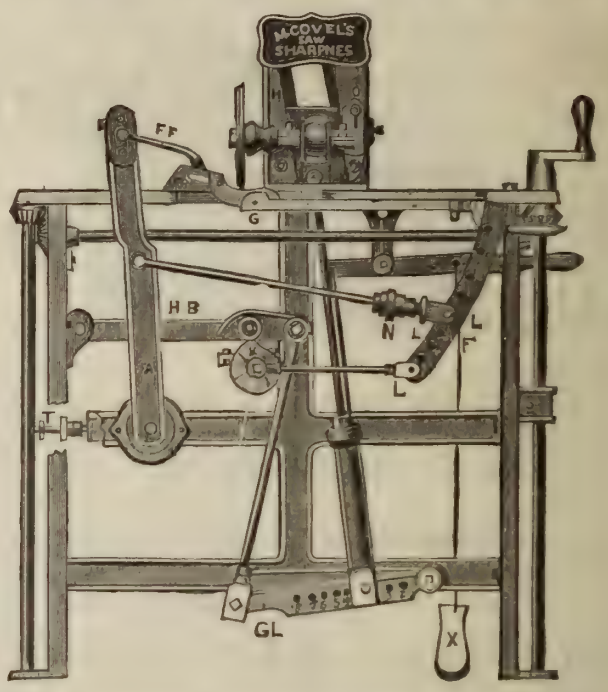
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The only Horizontal Saw Machine on which a thick slab can be cut from the bolt.

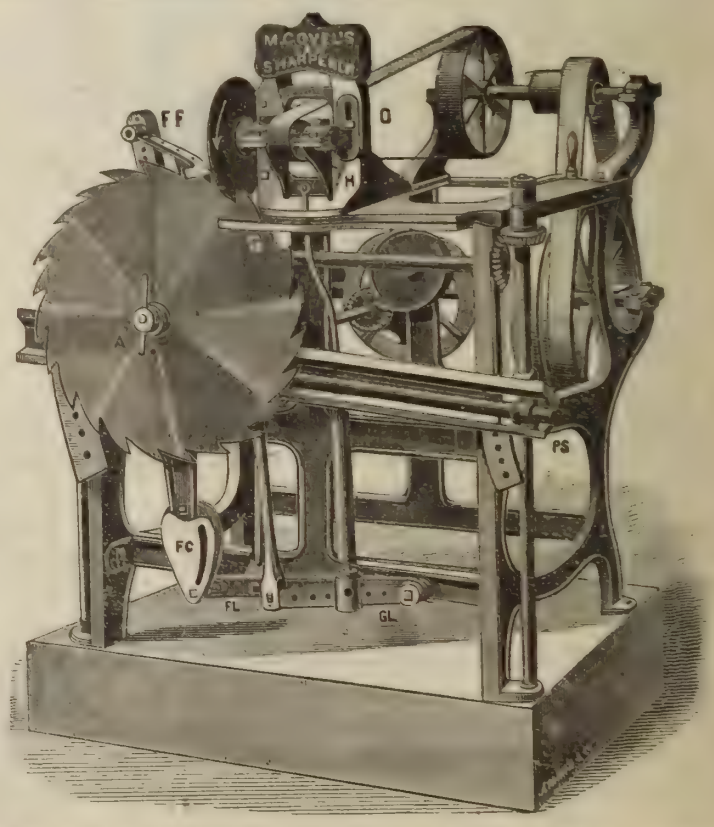
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VOL. 4. PETERBOROUGH, ONT., OCTOBER 15, 1884. NO. 20.

A PROBLEM OF THE FUTURE.

The number of lumber markets of importance which are springing up in the United States appear to be effecting the great centres of the lumbering business, where wholesale dealers did a large trade. The *Northwestern Lumberman* refers to this, under the above heading, as follows :

"The rule of division is becoming more and more applied to the lumber business. This application is opposite to concentration and multiplication of stocks at different markets. The tendency is to scatter markets and sources of supply, and break up old lines and directions of trade. By this manner of stating the case we mean to assert that whereas a few years ago there were main sources of lumber supply to the distributive trade, like Albany, Buffalo, Tonawanda, Saginaw, Toledo, Chicago, and the river towns, now there are many more points that are dipping into the distributive trade, which are scattered along the railroads in Michigan and Wisconsin, and rising up constantly around the lakes on the Mississippi river. Manufacturers who were once content to sell their lumber in block, are now eager to embark in the assorting and piling business. Muskegon is trying it, both at home and in Michigan City. There is a considerable car trade at the Saginaws, and it is increasing. The Menominee manufacturers are beginning to pile at the mills, for shipment from there partly, instead of altogether from this city. The railroad mills of interior Michigan do an extensive car trade in Ohio and Indiana. The same class of mills in Wisconsin ship assorted lumber in large quantities into Iowa, south Dakota, Nebraska, and to some extent into Kansas. Eau Claire, whose manufacturers once rafted all their lumber to points down the river, now pile probably 50,000,000 feet, and would pile more if they were sure of competitive freight rates. Only within recent years have Duluth and other Lake Superior shore mills been competitors for the southwestern trade, while the Lake Superior regions of northeastern Minnesota and northwestern Wisconsin are being cut up by new railroads, designed to draw off the abounding pine into western and southwestern distribution.

All this opening up of new outlets, and beading them with new mills, tends to divert lumber from the oldtime points of concentration. As a natural consequence it is increasingly difficult to control trade and prices. Every new railroad brings in a new factor in the freight problem, and a new competition in the distributive fields. When Chicago had only to watch Oshkosh, Stevens Point, and a half dozen middle river markets, the problem was much less difficult than it is now, since the merchants have to watch all creation and Duluth besides. Freights, prices and delivered lists must now be adjusted with reference to an appalling variety of competition. The lumber merchant here must have a head on his shoulders that is capable of comprehending a complex situation, and then, do the best he can, he is often chagrined to find out that somebody up above Wausau has beaten him out of his trade in Nebraska.

Chicago merchants are not alone in this difficulty. Some of the Eau Claire manufacturers stopped piling this season because their freight rates were arbitrated too high. St. Paul and Minneapolis on the one hand, and this city on the other, are vieing with each other to see which can complain the loudest about discriminating rates and rival cutting of prices. A hundred points are pulling out with all their might to secure a share of the trade. Everybody appears to desire to leave his lumber at the feet of the retail yard dealer and consumer in car load lots. All seem to want to ignore the great wholesale markets as much as possible. The effect is to increase competition and render the condition of trade exceedingly complex. It tends to uncertainty of prices. It is more difficult now than formerly to preserve a reasonable uniformity of prices between the different markets. Outside points profess to gauge their prices by those prevailing in Chicago, but lists emanating from this city are only a guide by which prices at outside places may be cut. Before there were so many railroads running into the interior of Wisconsin and Michigan, and reaching out into all fields of distribution, the leading markets on the lakes and rivers could easily control a relative range of values. Now it is impossible.

It is an interesting question as to what ultimate effect this cutting up of trade will have on the great wholesale markets. Will they gradually diminish in importance, or they will continue to hold their own against a multitude of small competitors? Coming into the problem is the changing character of the supply—the gradual diminishment of the proportion of good lumber in the older forest sections, and the increased proportion of coarse stuff. If the great markets keep up their assortments, as they must, as the only means of holding trade, there will have to be a vast amount of hunting through the woods in order to pick up the better grades. This will again complicate the distribution of stock. Indeed there is much of this eccentric movement going on now. It is difficult to determine how the stocks in the larger centres are to be kept full at a profit under the circumstances that are sure to arise in the not far off future."

MARKET FOR CANADIAN WOODS.

Mr. Edward Jack, Crown timber agent for New Brunswick, who represented his province at the Forestry Exhition in Edinburgh, writes an interesting letter to the St. John *Globe* in reference to the hardwoods needed in Scotland, the uses to which they are put and the manner in which they should be prepared for the English and Scotch markets. His observations are the results of interviews with Mr. T. R. Vaux, of Dewsbury, near Leeds, and Messrs. John T. Connell & Co., 106 and 108 Bothwell street, Glasgow, the latter being what are called in Glasgow "American merchants." We quote from Mr. Jack somewhat freely, as the information he imparts may prove of value to shippers in this part of Canada :—

Mr. Vaux says black birch is much used for the making of chairs and for cornice poles, which are from five feet six inches to eight feet in length ; their diameter two and a half inches. It is used in the making of tables, wardrobes and bedroom furniture in general, and in the manufacture of machinery, especially that which is employed in woollen mills ; it is also largely used for making drawer knobs. It would sell much better than it does were it sent in planks of from 2½ to 4 inches thick, and from 9 inches wide up.

The markings effect the price very much, and prettily marked birch should be shipped in planks from five to nine inches thick ; by being shipped in planks the character of the marking can be seen, and this will pretty much increase the value.

BEECH.—This wood is used for saw handles and tools generally and for saddle trees. Butts having a diameter of from 20 to 30 inches are used for machine rollers in the manufacture of woollen goods ; the length should be from 5 to 10 feet.

MAPLE.—Ordinary maple is used for the same general purposes as birch. Birdeye maple is not yet very extensively used, but is coming into fashion fast, as light-colored woods are being much more used for bed-room furniture than formerly ; it had better be sent in the log, choice markings will command a high price ; length should be six and a half feet and its multiples.

ASH.—English ash is becoming very scarce, the demand far exceeds the supply ; the gray, the yellow and the white would be the varieties most in demand, they might be sent in planks the same as birch.

Cedar planks might be tried if sound and clean. It should be three inches think and 11 inches and upwards in width.

Mr. Connell said that his experience with Canada had not been very satisfactory, especially in the matter of sawing ; if it were inch stuff that he had agreed for, he would be sent material ranging from three-quarters to one and a quarter inches. He further said that, in dealing with Scotland, dimension stuff must be strictly adhered to. A large quantity of broom handles are used in Glasgow, he said. London and Liverpool, however, were the best markets for disposing of them. Spruce or pine is usually used in their manufacture. The length is forty-eight inches ; diameter, one and an eighth inches. They are required to be free from knots and perfectly smooth. He thinks they might be very well made from slabs, as they are usually, he says, made from waste wood. The finest quality of them, he says, can be bought in New York cased at $16 per M. ; ordinary ones at a much less rate.

Handles of picks, hammers, sledges, etc., are made of hickory. A considerable quantity of rock maple, Mr. Connell says, could be disposed of. It should be cut to sizes either in boards or possibly in square or other sizes of given length and thicknesses. It would require to be entirely free from rots, shakes, blemishes, hearts and sap wood. I have already had several enquiries about hemlock for the purpose of coarse box-making, and people here who understand woods well think that sound hemlock will answer very well for that purpose.

Mr. Jack promises further information after visiting London. He is, says the Montreal *Herald*, a first-class authority on the woods of New Brunswick, and one of his objects in visiting Britain is to find, if possible, openings for the sale of those New Brunswick woods for which at present there is a limited market. Mr. Jack is very thorough in observation and will be found very practical in his advice.

INVESTMENTS IN THE SOUTH.

The Baltimore *Manufacturers' Record* makes a semi annual statement of the progress in the South during the last six months, showing an investment of nearly seventy millions in new and enlarged industrial enterprises, as follows :

The aggregate investments foot up $69,221,000, Alabama heading the list with $13,840,000 ; Kentucky $13,840,000, Virginia $11,032,000, Texas $7,934,000, Tennessee $4,849,000, Georgia $3,759,000, Maryland $2,831,000, North Carolina $3,639,000, West Virginia $2,428,000, Florida $1,506,000, Arkansas $780,000, and Mississippi $767,000, Louisiana $1,830,000, South Carolina $1,529,000.

The lumbermen of Georgia and Alabama have held a convention at Atlanta and passed a resolution that if necessary for the protecting of the milling interest, a stock company of the saw mill men should be organised and a lumber yard be opened in Atlanta, to be conducted through an agent to be elected by a board of five directors. This stock company to advance a certain per cent of cash to the shipper, and then hold the lumber until the company can dispose of it to the dealers, and they will remit balance to shipper, retaining a small per cent. which is be used as a fund to operate the business and to defray incidental expenses, etc. *Saw Mill Gazette.*

WHEN a saw has cracked near the teeth, to prevent its continuing, drill a small hole at the end of the crack. This is aid to be effectual.

THE ENGLISH TIMBER TRADE.

A fortnight ago we felt almost inclined to congratulate the trade on the dawn of a good time coming. The rate of importation had subsided very preceptibly in the month of August, and the Government being in the market for steam transports to Egypt, and a great bustle going on in loading them at the dockyards, it was expected that some rise of freight would keep speculators, whether here or abroad, from tampering with our markets, while there was no propect of doing themselves any good by their ventures.

But the tide of importation seems to have flowed again unexpectedly in September, and from all part we not only get accounts of large arrivals, but also that these are likely to be supplemented by a pretty long list of vessels, known to be chartered which have not yet put in an appearance; and there is, besides the stragglers intermediately, the whole of the regular Transatlantic fall fleet yet to be accounted for. So that we must not depend on any cessation of the rate of supply to the appearance of winter renders the chance of making a paying voyage in the timber trade, whether by steam or sail, very remote. We have been given to understand that both in Europe and America fewer timber ships than usual have accepted charters for autumn employment, and we heard weeks ago that already some of them were going into winter quarters. But have there not been rumours all through the season of deficient supplies to be expected from almost every shipping district? And figures are even now exhibited to us to prove the smallness of the stocks abroad in comparison of former years, and to convince us that the generality of shippers are hardly in a condition to complete their orders, much less to send forward market cargoes, and therefore that prices must rise before the season comes to a close.

On the other side there is an array of facts which will not be reasoned away, and they are totally opposed to the theory of there being any deficiency of timber in any quarter whatever. The list of arrivals in London last week was a curiosity. There were 35 cargoes of what is, by a figure of speech, termed "firewood," and a portion of it is no doubt used for kindling, but not for firing in the sense that firewood is used in France. On the contrary the largest part of these cargoes is good merchandise, that is convertible to a variety of useful purposes, notably for box and casemaking, where short length ($1\frac{1}{2}$ to $5\frac{1}{2}$ ft.) come in as usefully as long deals, and at a very much smaller price; and when upwards of 30,000 loads of this sort of odds and ends are seen coming into London in a single week, enough to cover six acres of ground 6 ft. high, some idea may be formed of the stocks on hand abroad, of which these snips and cuttings are only the refuse.

We speak of these cargoes as if they had no influence on the general timber market, but they, no doubt, assist to keep prices down, for of this large quantity not perhaps a third or a quarter of it will be used for its nominal purpose. The rest will be mostly sent to the saw mills for conversion, some of it into matches, but more into boards of various thicknesses, for every variety of box or packing case that commerce can find a use for within the compass of the lengths prescribed. Ends of 6 to 8 ft. long are in Sweden shipped as stowage at two-third price of the longer deals, according to quality, 9 ft. and upwards being considered what is called merchantable sizes, but a limit is assigned to the quantity of short lengths in a cargo by a condition that the shipment must average a certain length, usually 16 to 17 ft. Everything under six feet from Northern Europe is accounted firewood, and all the lengths are cut to a multiple of 6 inches, 18, 24, 30, 36 in., and so on, to justify their title of firewood, as the bundles sold at the greengroceries and oil shops are found to suit the public best in lengths of 6 inches.

It is worthy of remark that from Canada short ends 3 ft. and upwards are not accounted firewood, but are sold as deal ends, and generally fetch fully two-thirds the price of long deals of the same quality. Perhaps because they are wider, and better in quality, being selected for the purpose, as the large freight from that quarter would render inferior stuff of that size unmarketable. In some of the Russian ports anything below 12 ft. in length is treated as a deal end, and shipped at two-thirds price, but only as required for stowage. Custom has established the same rule in charter-parties as to deal ends. According to the usage at the port of shipment, they are charged two-thirds the freight of longer lengths, though it is usual to allow the abatement only on 6 to 8 ft. lengths.

Among the numerous inventions daily appealing to us for encouragement, is there not an opening here that has been overlooked? For instance, we are not aware that any one has yet applied for a patent to convert short deal and batten ends by a cheap and easy process into joists and rafters, of any length, and warranted stronger than those that are used, without a joint, size for size. With six acres of fathoms at market, the time suits well to try the experiment.

From this and other causes the prospects of the trade can hardly be said to be improving. Last week we suggested apologetically that war might not be altogether an unmitigated evil, though it is the fashion to speak of it as abominable, and to hold as monsters in human form, those who talk indifferently about, or who confess themselves ready to use the sword, politically or patriotically, whenever the occasion seems to require it. It is forgotten that our religion teaches us that in ancient times war to extermination was sometime waged under Divine authority. "Blessed are the peacemakers," is a precept of our creed, it is true; but were there no wars the occupation of the peace-makers like Othello's, would be gone.

A continuous heavy importation, accompanied by a check to the distribution of Government money, and a fading away of the demand for shipping, which was just beginning to brighten up, are not very favorable auspices for the autumn trade. On the other hand, the cheapness of money, a plentiful harvest, and a general belief that we on the eve of better times, keep trade from languishing, and the timber branch of it maintains its ground wonderfully well through all.—*Timber Trades Journal.*

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, Sept. 30, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., Washington, D. C. :—

305,868.—Hoop pointing and lapping machine—A. F. Ward, Detroit, Mich.

305,733.—Machine for making kindling wood—J. Bowman, Princeville, Ill.

306,016.—Lathe, wood-turning—E. H. Hudson, Potterville, Mich.

305,744.—Lubricator—W. H. Craig, Lawrence, Mass.

305,883.—Saw lifter, circular—W. G. Baumarlle, Fiber City, Mich.

306,038.—Saw mill dog—F. M. Underwood, Columbus, Ohio.

305,960.—Sawing machine—C. M. Pierce, Bridgeton, N. J.

305,760.—Sawing machine, circular—J. W. Robbins, St. Johnsburg, Vt.

305,922.—Shaping machine, adjustable table for—H. J. Hendey, Torrington, Conn.

PATENTS ISSUED OCT. 7.

306,173.—Barrel trussing machine—T. Murphy, San Francisco, Cal.

306,257.—Lathe tools, cutting blade for—M. C. Johnson, Hartford, Conn.

306,325.—Planer pressure roll—W. H. Young, Cincinnati, Ohio.

306,216.—Saw jointer and set—J. K. Bridge, Woodstock, Ill.

306,312.—Saw mill set works—W. H. Appleman, Danville, Pa.

306,221.—Sawing machine table, band—H. J. Cordesman, Cincinnati, Ohio.

306,186.—Sawing machine, circular—E. C. Smith, Brooklyn, N. Y.

306,237.—Screw driver—W. B. Gilmoure, Minneapolis, Min.

306,096.—Screw driver—C. H. Olson, Decalur, Ill.

306,210.—Willow stripping machine—W. Barry, Syracuse, N. Y.

National Manufacturing Co.

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The National Manufacturing Co'y, Ottawa:

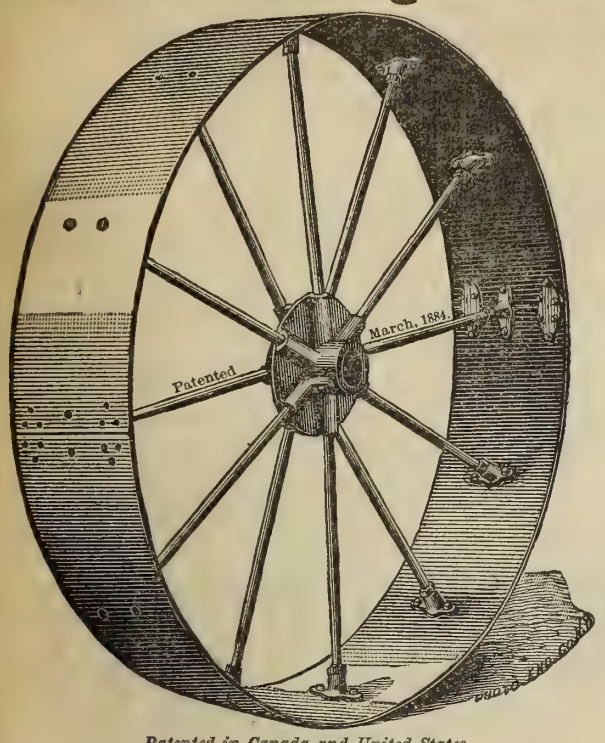
GENTLEMEN,—In reply to your enquiry, I beg to say that the highest awards made at the Industrial Exhibition for the years 1881, 1882, and 1883, for Tents, Marquees and Flags, were to your Company, being a Silver Medal for each year. Last year, 1883, was the first in which a medal was specially offered for Camp Furniture and Equipages, and it was awarded to the National Manufacturing Co'y, of Ottawa.

I am, your respectfully,

H. J. HILL, Manager and Secretary.

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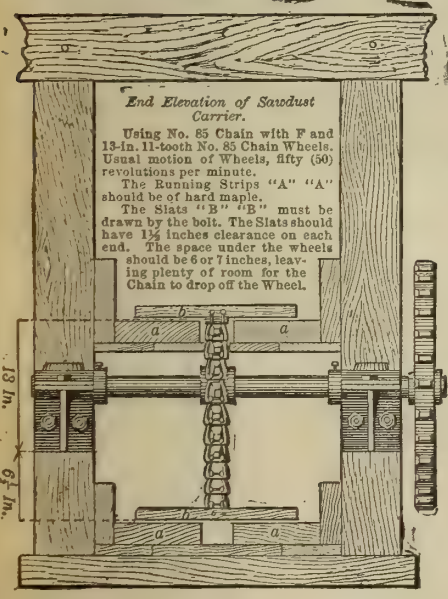
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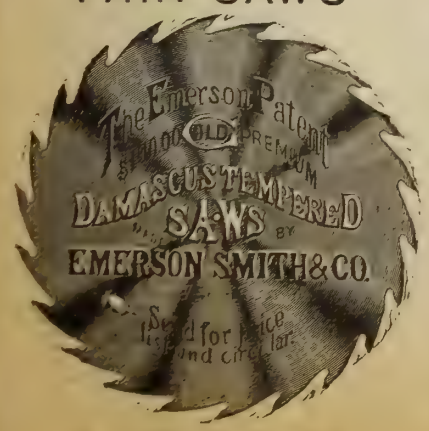
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CLIPPER FLANGE TOOTH SAWS.

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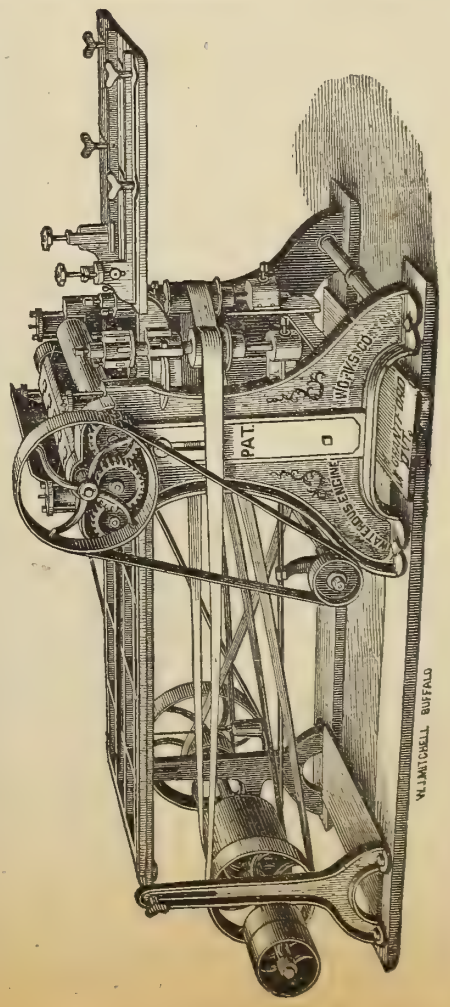
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52	"	20	"	"	6	"	73	" 20	" " 8 "
101	"	18	"	"	8	"	51	" 16	" " 8 "
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BRANTFORD CANADA.

DIFFERENT METHODS OF SEASONING TIMBER.

On this subject Mr. Wm. Harrower, Forester, Cahir Estate, Tipperary, Ireland, writes as follows in the *Timber Trades Journal* :—

"In countries like our own, where the supply of wood is very limited, the preservation of timber calls for serious attention, and the importance of this subject is shown by the numerous experiments which have been made to determine which system of preservation is most efficacious.

Omitting the attacks of insects, the cause most contributing to the premature decay of timber is alternation of dryness and damp. Timber, when totally immersed in water, or imbedded in any uniform and homogeneous matrix, appears to be nearly indestructible. The piles of Old London bridge, after being sunk for 600 years in the bed of the Thames, were drawn out in a state of good preservatiou. Some descriptimber are remarkably long-lived (if the term may be used) in a dry situation, from which arises the saying—

"Keep me wet or keep me dry,
One thousand years good wood am I."

Unfortunately for the life of felled timber, especially when of large dimensions, it is generally exposed to successive repitions of dampness and dryness, which speedily effect its destruction, if not protected in some artificial manner against these influences. In a few forest trees, such as teak, the wood is naturally protected against decay by the presence of an essential oil.

The first means tried as a protective was painting the timber, but in a short time this was found little better than useless, and nothing could be expected from an application so completely superficial. The least shrinking of the timber, a violent shock, an incision, or any one of numerous other causes would be sufficient to produce a crack in the paint, and allow the ingress of the destroying agent. In reality while the evil was at the core, the attempted remedy did not penetrate beneath the surface. After the futility of paint as a preservative had been clearly shown, some one hit upon the idea of impregnating the wood with a mineral solution, whose properties would be an antidote to decay. In the first application of this idea, the timber was merely soaked in the solution selected, but this operation was soon discovered to be of little service. The protective fluid was either washed out by the action of water to which it was subsequently exposed, or it did not penetrate far enough into the wood to be of any real benefit, especially when the timber was hard and of a close-grained texture. Under these circumstances it appeared necessary to force the preserving fluid into the pores of the wood by hydraulic pressure or other means known to engineers.

Having got thus far, the question practically was, What is the best solution? This question brought out a number of patent remedies in the shape of chemical solutions, and the public were thus enabled to form an opinion which was best. Sulphate of zinc, sulphate of copper, corrosive sublimate, sulphate of iron, and creosote have been applied. In fact, the latter has succeeded so well that "creosoting" has become a generic term applicable to the preservation of timber. The creosoting process is most esteemed in Britain, while sulphate of copper (Bouchiere's process) bears a high reputation on the Continent of Europe.

In the various experiments conducted with the view of determining the best solution, a length of time was necessarily occupied, otherwise the result would have been valueless for practical purposes. The number of years that have elapsed since there trials were made, now enables us to form a pretty clear idea as to the most successful process to adopt. No doubt in many instances creosoting and sulphate of copper have failed, but these are exceptional cases, which have probably been caused by the process being imperfectly completed, and it should be borne in mind that the variety of texture in different woods, and the nature of the ground in which they may be laid, modify very considerably the result of the process. With sulphate of copper or any other substance it is essential that the injected fluid should displace the natural sap of the tree, that the antiseptic operation be applied to sound timber recently felled, and that it be subsequently permitted to dry in the open air. In 1848, some timbers which had been duly impregnated with sulphate of copper were laid down in the Ligne du Nord, France, near the station of Compiegne, and when taken up a short time ago were found in a perfect state of preservation. Under the action of the saw they proved to have an excess of hardness over non-preserved timber of the same species, and neither their strength or elasticity was impaired to any appreciable extent.

The chief modes of decay in timber are known as wet rot and dry rot, both of which are indirectly due to the action of moisture—in the former by assisting the decomposition of the tissues of the wood, particularly the alburnum or sapwood, and in the latter by aiding the growth of certain cryptogams which obtain their nutriment from the substance of the wood. The reduction of the natural moisture in the wood itself by proper seasoning, and the prevention of the access of external moisture, is to some extent accomplished by a coating of some impervious substance, such as tar. Paint sometimes prevents wet rot, but for the reasons noted above this is not always successful. The same means are generally supposed to destroy, or at least to retard dry rot, but with the same unsatisfactory results. There is this peculiarity, that an excess of moisture is unfavorable to the growth of fungus which feeds on the wood; also, when the circumstances are favorable, such as a moderate degree of moisture, which most woods possess in themselves, and the existence of a warm stagnant atmosphere, no mere coating of paint will prevent the *mycelium* of the dry-rot fungus from penetrating to the interior of the wood. Once this gets affected, its destruction is rapid.

Many opinions are given regarding the season in which timber ought to be felled. Practically the question is settled. The period usually chosen for hardwood, with the exception of oak which is to be peeled, is from October to March, and conifers all the year round. Objections to felling timber during summer are based on the belief that the wood is full of sap. This, in our opinion, is an error, as in summer the sap lies more on the outside, including the young bark, for the formation of the annual increment of timber. We subjoin a table giving the results of an experiment made in 1867, showing the amount of sap in timber at various seasons of the year :—

January	340 lbs.
February	328 "
March	331 "
April	311 "
May	319 "
June	297 "
July	297 "
August	314 "
September	306 "
October	328 "
November	331 "
December	340 "

REMARKS.—In this experiment there were 25 pieces of timber of equal size cut each month and weighed. The figures show that in the months of November, December, and January there is most sap in the wood, as the blocks are heaviest; while in the months of June and July the weight of the blocks indicate little sap. This can be easily tested, and is worth trying.

There is considerable loss in heavy timber when allowed to split and crack with the brought, and care ought always to be taken to prevent damage of this sort. One great cause of splitting is from allowing the timber to dry too rapidly. In some parts of England the standing oak is peeled, and after it has stood for some time is cut down under the impression that it is a saving to the wood. This may be the means of preventing cracks, but it involves unnecessary expense. Splitting of wood necessarily occurs where the shrinkage is not uniform throughout, and as the heartwood contains less moisture than the sapwood, the latter shrinks more rapidly. Hardwoods contain about 40, conifers 45, per cent. of moisture.

There are two methods employed in seasoning timber—the natural and the artificial. The natural, as with everything else is the simplest, if not the best, being to allow the sap to evaporate of its own accord. The natural can be assisted by carting the timber as soon as felled into sheds, and having it cut into logs and stored within shelter for eight or ten months; after which it should be sawn into planks. Great care should be taken not to allow the planks to lie too close when ricked, but to have a passage of air freely circulating through them. The artificial system consists of the application of heat or liquid. One plan is to place the timber in a tank having an air pump attached, which is supposed to drive the fluid from the interior of the timber. To increase the tendency of the sap outwards, a higher temperature than that of the atmosphere may be applied with less risk of rending. By this process the timber can be seasoned in a few weeks. Of course there is considerable extra expense incurred, as an engine is required to work the pump, and it frequently happens that the wood is imperfectly dried. We advocate the natural process above all we have yet seen and tested. In both cases casting or twisting ought always to be guarded against. Some kinds of wood are more liable to cast than others, and we have seen the same kind grown on different places very different in the grain. The best examples of well-preserved timber are found in the roofs of churches. The roof of Westminster Abbey is set down at over a thousand years old, yet the timber is quite sound. Hence it at once appears that the best method is to keep it as permanently exposed to the free action of the air as possible. No doubt in this department science has done much to save time and expense.

The decay of timber, in our opinion, arises from internal moisture, as already stated, therefore the work of greatest importance is to expel the sap and keep the wood permanently dry. There are several paints recommended for this purpose. An oil taken from tar is much sought after as an unequalled preservative for outside timber, such as railway sleepers, fence posts, bridge piers, &c. The usual way of applying it is to fill a tank with well-seasoned timber, and to the tank is attached pump worked by steam. The oil is pumped into the tank, and a high pressure of oil is supposed to find its way into the pores of the timber. Force is the power required in this system, without which the process is unavailing. Green wood placed in the tank and treated in this manner receives little or no benefit; we are inclined to say it does more harm than good, as the internal moisture is pressed into the centre, and the pores being filled with the oil, it cannot escape; hence internal decay ensues. When the wood is thoroughly seasoned and placed in the tank, hot air ought to be first employed to open the cells; then under high pressure oil will penetrate into the centre, as we have seen railway sleepers saturated completely through. A plug in the bottom of the tank, with a connecting pipe to the reservoirs where the oil is pumped from, can be opened to drain off the oil, and by the application of hot air the wood is rendered dry, and can be handled comparatively clear. We have seen this method wrought with beneficial effect, though often with the opposite result, according to the amount of previous seasoning.

In ordinary circumstances, tar is the most economical preserving paint for estate purposes. Wire fence posts are frequently coated with tar previous to being set in the earth. Here we would recommend two tanks or wooden troughs about 20 ft. long, 3 ft. broad, and 2 ft. deep, to be filled nearly to the top, so that the liquid may not be lost by running over the sides when the posts are put in; the posts are set on end as close as possible, and the tanks emptied alternately, thus allowing some time for the fluid to penetrate the wood, a process requiring no skilled labor. A scaffold is erected close to the tanks upon which the posts are laid out to drip, and the fluid runs into the tanks again. The advantage of this system over the charring method used for the same purpose is that one laborer can easily smear from one to two thousand posts per day. Our own system is to cut the wood into posts as soon as felled, and stack it until perfectly dry; to allow ample time we always have it prepared a year beforehand. If larch is thus treated, it is exceedingly hard and durable, and capable of resisting the encroaches of damp for a long period.

TIMBER IN ALBERTA.

Although the district of Alberta, N. W. T., is largely a prairie region, and rich in grazing and agricultural lands, the rivers are fringed with a considerable quantity of timber. The *Northwestern Lumberman* says that the Eau Claire and Chippewa Falls, Wis., syndicate own a large body of timber on Bow river and was to begin lumbering operations there a year or more ago, but nothing has been learned of the enterprise of late. Mills are, however, in existence in the vicinity of Calgary, cutting for the local demand. Since there is a prairie country in that region, of vast extent, the increase of population will call for an immense quantity of lumber in the years to come. The Calgary *Herald* speaks of the timber resources of the country as follows: "The quantity of timber in Alberta has been much underestimated. It is only lately that explorers, having gone pretty well through the country, off the beaten routes, found that there are thousands of millions of good clear spruce and cypress pine, which will be easily available for the supply of the whole North-West. This timber lies principally along the valleys of the innumerable streams which, flowing eastward from the mountains and foothills, gradually join one another until they form the great Saskatchewan rivers. These streams and rivers provide abundant water power and numerous good mill sites. The timber consists principally of spruce and cypress pine, making fair common lumber; red fir, a hard, close-grained wood, excellent for inside finish; tamarack in small quantities, and plenty of cottonwood and poplar, which make good firewood."

TIMBER IN MEXICO.

"From the frontiers of Guatemala to those of the United States," says the *Mexican Financier*, "we have a vast domain whose growth of precious wood is truly enormous. Along almost the entire length of the coasts, both of the Pacific Ocean and Gulf of California, a variety of woods abound that are remarkable for their perfumes, as well as such valuable cabinet timbers as the rosewood, mahogany, ebony and the cedar. The Mexican cedar is especially prized in foreign markets, for overlooking its rich aroma, it possesses such a lightness of weight and a grain so fine that it is considered superior to the ordinary walnut now so largely used in the manufacture of rich furniture. While the interior states rival the coast states of Mexico in valuable timber resources, it is a noteworthy fact that the woods which command good prices in many foreign markets are here almost everywhere burned as carelessly as the cheapest fuel. The coming exhibits in Boston and New Orleans should attract to the neglected regions of Mexico, so rich in wooded wealth, their deserved attention."

FOUNDATIONS FOR BUILDINGS.

In many sections where stone is scarce and brick not easily obtained, wood is from necessity employed in foundations for houses and other buildings. The wooden supports usually consists of sections of a log one or two feet in length, set upon end at the corners and other parts of the building. Blocks thus placed decay in a few years, especially where the sills rest upon them. There are two plans whereby this trouble is in a great measure overcome. Two well seasoned and oiled blocks, four inches wide, two inches thick and ten inches long are placed edgewise on the top of the foundation blocks. This ensures a free circulation of air, and rapid evaporation after a rain. The lower block is cut in the form of a triangle, and laid upon the ground, thus shedding rain and quickly drying out when wet. Another form of wooden support for small buildings consists of pieces of sawed stuff, two feet long, two inches thick, and six inches wide, laid up like open brickwork. This makes a very neat foundation, and dispenses with the building lattice work. If the outer face is planed and painted, this adds to the good appearance and utility as well as durability of the foundation.—*American Agriculturalist.*

J. A. LUNNEY & Co.'s mill, near Evart, Mich., was burned Sept. 15, and about $4,000 worth of hardwood lumber. The loss is about $15,000: insurance, $9,000.

THIN SAWS.

A great deal has been said and written in regard to thin saws being preferable and superior in every sespect to those of thicker gauge. While all the arguments in favor of the former as against the latter, may be true when viewed from a certain standpoint, it may also be set down as a fact that the only thing which will force the introduction of thin saws for general milling purposes will be the scarcity and dearness of timber. Mill men, while timber is as plentiful as at present, will continue to exert their energies to get the most lumber possible out of the machinery in use, because machinery power and labor is too expensive to permit too much regard being paid to the number of logs consumed. The thicker the saw the greater the speed to which it can be run, is considered an undeniable or undisputed fact, and until the scarcity or inexpensiveness of timber shall reverse the present condition of the milling business at the manufacturing centres, it will be futile to attempt to supersede the present saw in general use by one of much thinner gauge. Profit and loss is the only available argument in this connection, and until it can be demonstrated practically that there is greater profit in running thin saws and saving timber, than in using a thicker gauge saw and necessarily wasting a certain percentage of timber thereby, all argument in that direction would be futile. That thin blades are superior in a certain sense is undeniable, but so long as they continue to place the expense account on the wrong side of the ledger for user it will be found impossible to bring them into general use.—*Lumberman's Gazette.*

LUMBER.

Some uncertainty of feeling has pervaded the lumber trade for a few weeks, owing to the comparative lack of American demand. The approaching election in the United States had disturbed business and delayed intending purchasers, while a feeling that prices were likely to be lower rendered dealers the less disposed to buy. This feeling is being dissipated, however, since the meeting of producers at Saginaw the other day, when the mill men agreed to shut down for a certain season, and so restrict stocks. In Canada, too, there are signs of a lessened output from various canses. The Georgian Bay Lumber Co., for instance, will limit its cut of logs the coming winter to one-half its usual quantity, while the British Canadian Lumber Company may be looked upon as out of the running for the season, so that in the western section of Ontario, less will probably be got out. And we do not think that any lavish policy is likely to be pursued by operators in the Ottawa territory. Prices of choice pine lumber may be said to be well maintained, and meet some inquiry. The principal transactions in the Toronto market have been in coarse grades, of which fair shipments have been made.—*Monetary Times.*

AN EASY TEST FOR LUBRICANTS.

The manager of any mill may, at very little expense, determine for himself all the conditions of safety and economy in lubricants as indicated by the standard of heat developed upon any given shaft. The apparatus required for this purpose is merely a thin glass tube closed at the ower end, and two thermometers. The method of using this apparatus is as follows: Place enough water in one of these tubes so that the bulb of the thermoneter will be immersed; insert the tube in one of the holes in the cap of the journal, so that the lower end of the tube will be in actual contact with the shaft, hang the other thermoneter free alongside, then gauge the relative heat developed with oils and with greases. Each man may thus satisfy himself as to which is the best and safest.—*Saw Mill Gazette.*

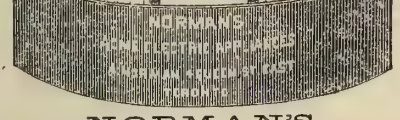
A COMBINATION of lumber dealers in Delaware has, it is reported, been formed for the purpose of handling a large quantity of Saginaw lumber the ensuing winter by rail, the object of the combined movement being to secure better rates than single dealers could obtain, and also better prices by purchasing large blocks of stock.—*Lumberman's Gazette.*

Russian Forests.

A great diminution in the forest trees of Russia has taken place during the last thirty years, and as a result it is said that the climate has changed for the worse. This is especially the case in the districts around Nishul, Novgorod, and Moscow, whose fruitfulness has been greatly impaired. In the Moscow government, formerly rich in fruit-bearing trees, apples and cherries now have much dscreased in number, and pears have wholly disappeared.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain and cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup for children teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentery and diarrhoea, regulates the stomach and boweis, cures wind, colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for children teething is pleasant to the taste, and is the perscription of one of the oldest and best female nurses and physicians in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.



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Yours truly, J. GREEN.

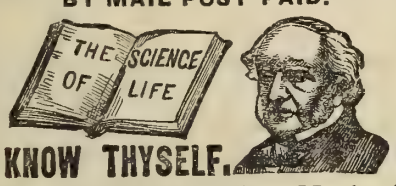
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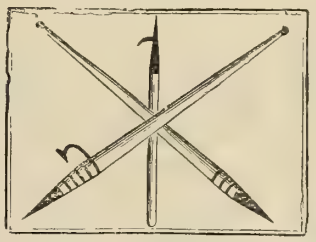
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The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., OCT. 15, 1884.

A COMMITTEE has been appointed to consider as to what steps should be taken for the formation of a School of Forestry in Scotland.

THE shipment of lumber from Alpena, Mich., during a recent week amounted to 7,280,000.

GOODRICH & PLANK'S saw mill and handle factory, near Petoskey, Mich., was burned Sept. 21.

WM. FUNDA & SONS' planing mill at Syracuse, N. Y., was burned Sept. 25, causing a loss of $20,000 ; insured for $6,000.

H. STEPHENS & Co., of St. Helens, Mich., will, the coming winter, put in a full complement of logs—that is, 40,000,000 feet.

IT is reported that on the headwaters of Muskegon river contracts for putting in 250,000,000 feet of logs have already been made.

ROBERT DOLLAR and Geo. W. Rule, of Marquette, Mich., are to be associated together in lumbering operations on the upper Michigan peninsula.

LOUIS SANDS, of Manistee, Michigan, has a saw, shingle, lath and planing mill at Cypress Hill, Northwest Territories. The plant employs 35 men.

THE clipper brig Presidente, built by Sampson, of Levis, Quebec, for trade on the south-eastern coast of South America, was launched on Tuesday evening from the builder's yard.

OVER 150 small wooden portable houses for Panama canal have been built at Quebec and are being shipped on board the Italian bark Florida outward bound for Aspinwall.

IT is said that numerous attempts have been made near Cadillac, Mich., to rob lumbermen on their way to and from the woods; apparently hoping to secure large sums of money which teamsters and foremen frequenty carry to their employers.

THE North Carolina Car Company is constructing the exposition building for the fair at Raleigh. The building will cover 71,000 square feet, and will require 600,000 feet of lumber.

THE sash and blind factory of Ehler & Co., Cincinnati, Ohio, was burned September 28, causing a loss of $25,000, which was believed to be fully covered by insurance.

THE J. E. Potts Lumber Company is floating railroad iron down the Au Sable river, Mich., about 30 miles below Grayling, where the company is constructing a logging road 17 miles long, over which it is proposed to put in 15,000,000 feet of logs.

THOUGH the prevailing opinion is that the coming log crop will be smaller than it was last year on account of the oversupply, it is said that the Roscommon, Mich., Lumber Company will put in more than ever before, the intended amount being from 30,000,000 to 50,000,000 feet of logs.

W. S. NELSON, of Cedar Lake, Montcalm county, Mich., who has become financially embarrassed, lately sold 500 acres of pine land to J. S. Crosby, of Greenville, Mich., for $80,000. The amount of timber on the tract is estimated at 20,000,000 feet. Mr. Nelson has other pine in that vicinity.

THE demoralization in lumber rates from Chicago, according to the *Times*, is becoming more extensive daily, until it has assumed a decidedly sanguinary aspect. The rate from Chicago to Omaha is ten cents per hundred pounds, and twelve cents to Kansas City, a cut of nearly 50 per cent below tariff.

THE mill of the Rainy Lake Lumber Company, at Rat Portage, Ont., is running night and day, and employs 100 men, and will run until cold weather compels it to stop. A new gang and other improvements will be put in the coming winter. A burner costing $12,000 will also be erected. Laborers are scarce at Rat Portage at $2 a day.

IT is the opinion at Ludington, Mich., that wages in the camps the coming winter will be as low as $16 a month. During the past summer wages have been $22, $24 and $26 a month. The proposed early closing of the mills will turn loose many men who will be obliged to go into the woods at such wages as shall be offered, and they will be lucky to get any work at that.

As soon as the dam is built across the river at Tronton, Messrs. Gilmour & Co. intend erecting a large factory for the dressing of lumber and the manufacture of sash, doors, blinds, &c., &c. This itself means an addition of a thousand to the population. But in our opinion there will be twelve months after the dam is built, several factories and mills located here and in process of construction.—*Courier.*

THE area of the forests of the world is set down as follows:

Country.	*Acres.*
Canada	900,000,000
South America	700,000,000
United States	560,000,000
Europe	500,000,000

The timber and lumber wealth of Canada is about double that of the United States or Europe. Step by step we will come to understand the unequalled resources of Canada. These forests mean untold wealth to the Dominion.—*Ex.*

RAFTS ARRIVED.

The Quebec *Chronicle* has the following list of rafts arrived:

Sept. 23.—Price, Bros. & Co., spruce deals, Saguenay.

Sept. 29.—Thompson & Son, waney and square pine, elm, &c., Peterborough.

McLaghlin Bros, white and red pine, Cap Rouge.

Wm. Little, deal, plank, &c., Roche's Mill, Wolf's cove.

Sept. 30.—Peter McLaren, sleepers, St. Lawrence Docks.

THE DOMINION EXHIBITION.

THE Dominion Exhibition was held at Ottawa from 22nd to the 26th of September, and that city being the headquarters of the lumber trade of the Ottawa Valley, the exhibits of lumbermen's supplies, of all descriptions, formed an extensive and interesting part of the show.

The Montreal Saw Works exhibited their saws largely and distributed in a generous manner their new illustrated catalogue. In connection with their exhibit was noticed two new ideas in mill requisites—a lath binder, very simple and complete, by Mereweather & Co., of Hull, and a saw filing muchine by Cushman & Chambers, of Hull. The former being in operation was an object of interest to lumbermen.

The Prescott Emery Wheel Co. had a large and excellent exhibit and were the only exhibitors of that manufacture. They were awarded, as an extra prize, a silver medal for assortment of emery wheels. At the Montreal exhibition, where opposition was offered by exhibits from the "Hart" and "Diamond" emery wheel companies, the "Prescott" was awarded a silver medal as an extra first prize.

The National Manufacturing Company had a most excellent exhibit of tents, flags and camp furnishings, and were highly complimented by the judges, who awarded them three medals. They carried off four at Montreal and three at Toronto.

The other great tent company, of Ottawa, the International Tent and Awning Co., had a large and pleasing display of tents, hammocks, &c., tastefully arranged for the use of tired visitors who thronged the grounds.

The Mocock Axe Works, of Montreal, had samples of their famed axes on view.

Corron & Co., and Golden & McCollough, of Galt, each exhibited a good display of heavy wood-working machinery, most of which met with ready sale at the exhibition.

R. H. Buchanan & Co., Montreal, showed a very fine assortment of wood-working machinery by different makers, this firm being agents for representative machinery makers.

Roblin & Sadler, manufacturers of leather belting, fire engine hose, &c., Montreal, exhibited a fine display of their goods, and carried off the honors, as usual.

The exhibits of table supplies were numerous, among the more noticeable of which were the the Canada Soup Co., Oakville, the Cook's Favorite Baking Powder Co., and Johnston's Fluid Beef.

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c, measured and culled to date:—

	1882.	1883.	1884.
Waney White Pine..	2,201,705	2,785,866	2,090,485
White Pine.....	7,161,267	5,641,387	3,493,102
Red Pine.....	1,329,262	395,646	299,751
Oak.....	1,052,977	1,591,323	706,100
Elm.....	635,205	309,261	644,073
Ash.....	243,301	254,198	380,017
Basswood	1,278	1,244	3,992
Butternut.....	2,585	1,028	1,121
Tamarac.....	12,445	5,159	18,868
Birch & Maple.....	268,282	138,803	195,175
Masts & Bowsprits...	33pcs	—pcs	—pcs
Spars.....	51 pcs	— pcs	41 pcs
Std. Staves.....	333.0.1.27	617.0.2.6	45.6.3.26
W. I. Staves.....	1134.3.0.6	467.5.3.29	78.2.2.10
Brl. Staves.....	75.4.2.29	87.2.1.19	0.6.2.13

JAMES PATTON,
Supervisor of Cullers

Quebec, Oct. 3.

LONDON.

The *Timber Trades Journal* of Sept. 27, says: There were several parcels of timber disposed of on Wednesday, but we are not able to record any improvement on former prices. Some sawn logs from Mobile, full dimensions went decidedly low, the best price obtained being 60s. a load for 14 to 17 inch stuff, the 12 in. and upward going at 55s. and 57s. 6d.; these latter, however, were shorter lengths. Most of the dealers are well supplied, and this in the face of large stocks at the docks may be expected to keep prices at a comparatively low level for some time to come. Still good sound parcels of large dimensions, both hewn and sawn, of southern pine, when offered met with a ready sale, and with this class of wood, like other sorts, stocks of choice descriptions are not overdone. Some ten pieces of Quebec waney board pine sold well at £4 5s. a load without reserve, but the absence of broad planks from the market would naturally give a stimulus to the bidding for such wood as this was.

Ash timber from the pitch pine ports is not commonly seen in the public sales; nevertheless it does not appear to take very well, judging by the values obtained for the two little lots sold this week.

There were some biggish reserved parcels of Quebec ash as well as yellow and red pine timber in the sale to choose from had anyone been that was inclined, but the room was mute, and to the broker's invitation there was no response. There was evidently no intention to press the goods, the upset prices, a trifle under £5 a load, offering no temptation to those who felt inclined for a little speculation.

High-class goods, as we have often remarked, are always able to command their price, even in these dull times, and their appearance in the public sale catalogues now and again is more by way of advertisement than with any real expectation of their being sold publicly.

The sale on Thusday was pretty well attended, and we fancied we could discern a somewhat livelier spirit pervading the room than has been apparent recently. The big parcels of pine that were in the catalogue doubtless attracted many who do not, if they can possibly help it, look beyond the saleroom for supplying their requirements; to such as these anything in the shape of pine goods in the catalogue without reserve comes as a positive boon, especially in the better qualities. Spruce prices read low, but as far as Quebec goods are concerned really seasoned stuff even now fetches its price. The goods ex Rota, which sold cheaply, were only a middling lot, and the values were indicative of no change either one way or the other.

The Quebec pine, on the other hand, showed a firmness that bore out the prognostications of a few weeks back. Two lots of 3rd regulars realized £10, which is a decided advance on the earlier sale prices of the season.

Of the the other descriptions offered in the sale prices were only moderate. The Mobile pitch pine ex President hardly went so well as those of the day before, but the Pensacola boards ex Ross shire seemed in better request.

The prices obtained for these goods read very well, and 1x13 stuff at £9 5s. cannot be pronounced as badly used. It is somewhat remarkable that such a limited quantity of board sizes comes from the Gulf of Florida, especially as they seem to sell to quite as good advantage as the thicker stuff. The saving in freight alone would tote up to a big item at the end of the year.

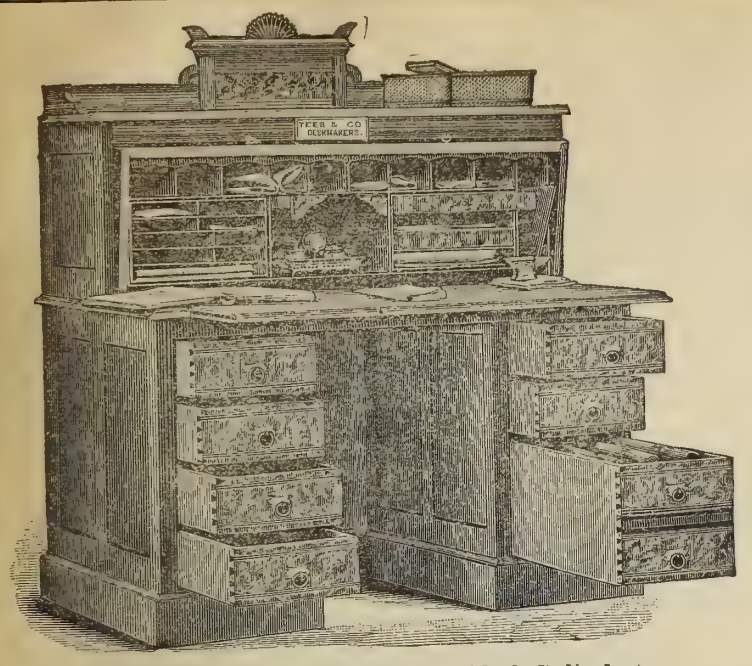
CARDIFF.

The *Timber Trades Journal* of Sept. 27, says: During the past week there has come to hand three cargoes of timber from the Baltic, one of wood pulp from Drammen, a deal cargo from the White Sea, and a pretty large timber cargo from Quebec. We regret to say that business is, if anything, rather worse, and there does not appear to be any prospect of an immediate revival. Indeed, we may say there is not a single freight here for either Cardiff, Newport, or Swansea; not even for small sailing tonnage is there anything offering. This will be a sufficient indication of the feeling among our timber merchants, as free-on-board prices are tempting enough, and rates of freight, in our experience, lower than they have been before.

The Lumbering season.

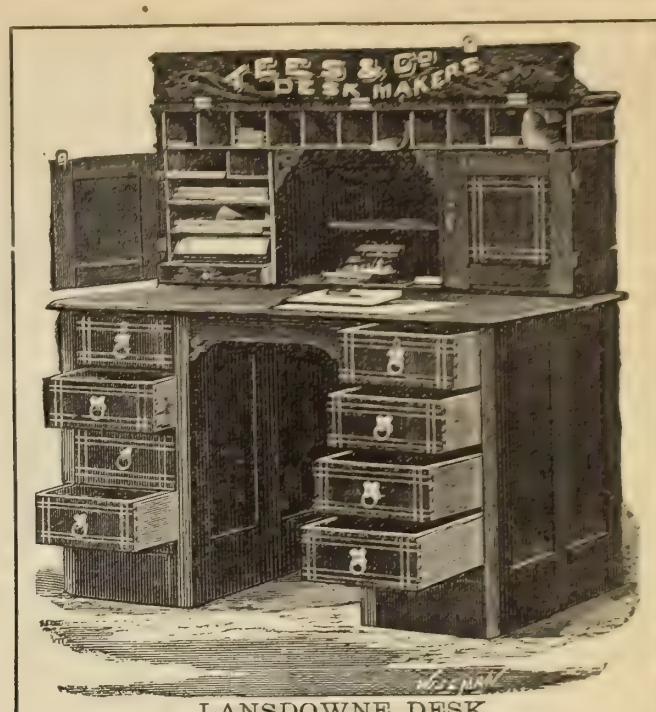
A despatch from Ottawa dated Oct. 12 says that a large number of shantymen have arrived in that city. The lumber firms can procure all the labor they require without much difficulty. The prevailing scale of wages is as follows:—Loggers, $20 to $22 per month; scorers, $20 to $24; liners, $26; hewers, $34 to $40. It is anticipated that there will be a large quantity of logs taken out in the Upper Ottawa limits this season. The square timber output will be small, owing to the dullness of the Quebec market. Very few sales of rafts were made this year.

ON Oct. 4th Thos. J. Kilduff, aged 28, son of the late Peter Kilduff, blacksmith, of Ottawa, was accidently killed at Luther Lake county, Michigan.



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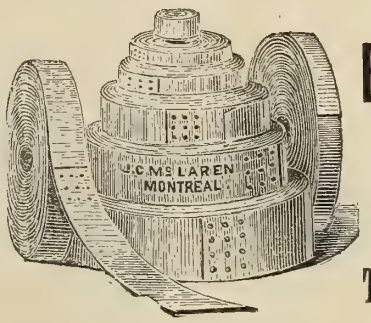
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EXTRAORDINARY RAILROAD LOGGING.

Some time since the *Gazette* alluded to a projected movement of the Ward Brothers to transport a large amount of first quality of timber from the headwaters of the Manistee river to the Saginaw river mills for conversion into lumber. * * * Mr. Ward has demonstrated that it is entirely feasible to transport these logs by rail to the Saginaw river after running them down the Manistee 250 miles. Four million of these first-class logs have already been brought here from the Manistee, in demonstration of the entire feasibility of the plan adopted by the Ward Brothers.

The new log loader built by Ward Brothers, at Manistee, has been running successfully for a month and the Flint & Pere Marquette railroad are unloading daily a train of 20 cars of logs.

The log deck consists of an endless chain and incline with two log canters and double log packers. A 12x18 engine fed by a 14 feet by 44 inch steel locomotive boiler drives the machinery. The chain, canters, and sliding skids for top loading are run by heavy frictions and the entire machinery works effectively, handling the largest logs with ease and dispatch.

With a full force of 18 men, 60 cars carrying 300,000 feet, can be loaded daily and sixty million feet of logs delivered via the Flint & Pere Marquette railroad to Saginaw during an ordinary sawing season of 200 days.

With a crew of eight men, Ward Bros. are loading 20 cars per day with 100,000 feet of logs which are banked by the same crew. The pine being shipped consists of six million feet of selected cork pine logs running 2½ logs per M feet and one million feet of selected Bull sap pine running 3½ per M feet.

The following table shows the work done during the first two weeks of shipping :—

	Feet.
Largest train load 20 cars scaled.....	121,672
Smallest train load 20 cars scaled.....	95,000
Average car load, largest train.....	6,082
Average car load, smallest train.....	4,750
Largest car load.....	7,450
Smallest car load	4,000
Average car load for two weeks hauling.	5,900

These logs were cut in town 26, N. R. 6 west, and run 250 miles by river and 140 miles by rail to Saginaw. Manistee cork pine has the same characteristics that distinguished the Cass, Chippewa, and Tobacco river stocks of early days. On account of it being among the first good stocks cut in an early day when the choicest trees were selected and knotty and small logs left in the woods. Cass river pine gained the reputation of being the best timber that ever grew in the state, despite the fact that just as good timber was cut from the Chippewa and Tobacco rivers, and is now being cut from the Manistee as ever grew on the Cass. The Manistee timber grows among hardwood, is long trunked generally cutting from four to five logs to first limbs, has thin sap and runs very rich to uppers and fine common, selects and cutting up.

Three million feet of logs cut from the same tract of timber that Ward Bros. logs were cut from were sawed at Dempsey, Carter & Co.'s mill at Manistee a few years since which graded 50% uppers and 25% fine common and selects.

The chief recommendation of large cork pine is its light soft cheesey character, and the great width of the thick uppers and selects. It is cheaper to freight, drys out quick, and when finished stays in its place without shrinking or wraping, better than any other timber, consequently it is preferred by builders and pianomakers.

The Ward logs are being sawed at Backus & Binder's mill, Saginaw City. Clear plank 40 inches wide and six inches thick have been taken from this stock and can now be seen at the above mill.

The railroads centering on the Saginaw river are also interested in this movement as well as the timber owners and mill men. Here is 1,000,000,000 feet of first class timber which can be fastened on with certainty if the railroads will furnish transportation direct from the source of supply.

The Grand Rapids and Indiana road is making a movement looking towards securing this timber for Grand Rapids, by building a branch from Kalkaska into the heart of the timber country. The Michigan Central road can reach this timber by constructing 12 miles of track; and a system of branch roads will enable them to handle 1,000 million feet of this timber. It is certainly worthy of their earnest consideration, as it would require about 300,000 car loads to complete the job. The F. & P. M. railroad can also reach it from the Harrison branch, which is only 24 miles from the timber, and it will certainly be to its interest to make the move, as the country through which it will pass is, outside of the log traffic as liable to be remunerative as some other portions of the road. —*Lumberman's Gazette.*

THE STRONGEST PART OF A TREE.

It might be supposed that every layer from pith to bark is in a different stage of perfection, the innermost or earliest being the most matured, would be the strongest, but experience teaches us that this is only true up to a certain period of growth; the greatest strength and toughness lies nearer the more recently formed heartwood, or part nearest the sap-wood. For this reason it becomes a matter of great importance in selecting timber for special purposes requiring great strength and toughness, to have as little sap-wood as possible and as little pith. That is to say, cut as near the sap-wood as the timber will allow, for it should be observed that a tree does not cease growing when it comes to maturity. As long as it is alive it continues to increase in bulk by the addition of the annual layer, but when maturity is once passed each succeeding year produces a certain degree of deterioration. This decay appears in various stages, and generally exhibits in the first instances either a white or yellowish color at the but or root end of the stem. If white the decay is very slight and does not appear more than a few feet up, but if a yellowish red in color, it is not unfrequently of a most serious character; again if the effected parts have assumed a decidedly red tinge, the tree is said to be foxey, and scarcely fit for any purpose, as the decay will be found to prevade a great portion of it. A more advanced stage is that which may be described as a drying up or wasting away of the wood surrounding the pith. It forms a hollow, first at the butt, and then spread upward, gradually increasing in size as the tree gets older, while the defect may eventually reach into the branches. Trees are most valuable as yielding the largest amount of good timber just prior to their reaching maturity, which is indicated by the topmost branches and branchlets becoming stunted. If, therefore, we wish to select a healthy tree for felling, we must seek one with an abundance of young shoots, and the topmost of which look strong, pointed, and vigorous, this being the most certain evidence that it has not passed maturity. When there is evidence of permanent decay in a tree the best thing to do is to cut it down and convert such parts of it as will answer the purpose into lumber, and the balance into firewood. The longer it is permitted to stand, after decay sets in, the more worthless it will become for any purpose.—*Builder's Journal.*

HINTS ON THE CIRCULAR SAW.

We know of no manufactured article of which more is required than of circular saws, and probably none heretofore so little understood. Improvements have demonstrated that they can be made as reliable as the most common article, and circulars have been issued explaining some of the principles governing them, that errors may be more readily discovered and corrected.

A circular saw may be dressed on both sides alike, accurately rounded, and in perfect balance, so that all the teeth in their contact with the timber shall have an equal amount of work to do. When saws are out of round, to remedy the defect a piece of grindstone or emery wheel should be held against the teeth while the saw is revolving, thus reducing the most prominent points.

ON FLYING SAWS.

When taking orders for new saws we intend always to get explicit information as to what they are required to do, and in sending out saws to put in the pitch and depth of tooth best adapted to the work they have to perform; consequently, in sharpening the same, preserve as nearly as possible the original style and pitch of teeth as were in the saw when received from the factory. The filing should be done almost exclusively on the under side of the tooth, the top being filed only just sufficiently to keep the same in proper shape.

The filing of a saw more fleaming on one side than the other causes the saw to lead in or out; it soon heats and trouble ensues.

The throats of the teeth should be kept chambered out, so there will be sufficient space to carry the saw-dust, or it will choke and heat, the rim will become too large, and the saw will run shaky.

Saws of any kind are liable to crack if filed to a square corner.

ON GUMMING SAWS.

In the use of emery wheels on large saws much care should be exercised. Saws under no circumstances should be "blued," by the wheel, for when the points of the teeth are heated to a red heat, as is often the case, the life of the steel is destroyed and rendered tender, brittle and fractious. Again, some emery wheels, even with the most careful use, will leave a glaze on the steel, in which case the teeth will check and split in swaging; after being dressed with the wheel, the teeth should file without difficulty, and, if they do not, trouble in swaging is almost sure to follow.

We have had saws returned to us, of which the points of the teeth were brittle and tender, but which stood all necessary tests when shipped from our works. We reduced these one-half inch in size, and found the teeth excellent, standing the swage perfectly, which was conclusive that the trouble was caused by the emery wheel. The harder the wheel the more it will glaze; for this reason soft wheels should be used, and both saw and wheel should kept in motion as the work is being performed, to prevent glazing and heating the saw.

ON HANGING THE SAW.

In hanging the saw care should be taken that the mandrel be absolutely level, so as to allow the saw to hang plumb, fitting as tightly in the boxes as it can be made to run without heating; and that the collars are perfectly and properly made.

The mandrel should be made of steel, it being difficult to make an iron arbor that will continue to run true, as from the nature of the metal hard and soft spots will appear, which cause it to wear out of round.

Both collars should be turned flat from the outer edge three quarters of an inch toward the centre, then chambered out a trifle, (say 1-64 of an inch) to the shaft. Both should be perfectly true.

To ascertain whether the collars are defective, place the saw on the mandrel and tighten up the collars by hand, test the saw with a straight edge, and if made correct, tighten up the collars with a wrench, and test again with straight edge to see if the position of the blade has been altered. If any change is noticed, it is safe to assume that the saw is true, and that the trouble lies in the collars; nor will it be possible to secure satisfactory results until the defects are remedied.

The saw should slip freely on the mandrel and close up to the fast collar. In many cases the stem of the arbor being a trifle large near the collar, the saw, by being forced to its place by the nut is made full on the log side.

When it is found necessary to do any filling at the centre or lug-pin holes, see to it carefully that no burr is left on the edges.

A saw should never be taken from the arbor very hot at the eye and placed in a leaning position, as it is liable to dish it. It is well to cool the saw by allowing it to run for a short time out of the cut before it is removed from the arbor.

ON LINING THE SAW.

Observation has taught us that the principal cause of trouble is in the lining of the saw, for if not done properly, the saw heats, causing it to run snaky in the cut.

A new saw should be lined almost straight, leading into the log the least amount that will keep it in the cut, prevent its heating at the centre, and scratching the lumber when the carriage runs back; we should say from 1-64 to 1-32 of an inch in the diameter of the saw. The only proper way to change the line of direction of the saw is by sluing the mandrel in the way necessary to accomplish the object.

Trouble is often caused by the track—on which the carriage runs—being out of true, and should be often examined.

A simple method of lining a saw, first ascertaining that the saw hangs perfectly plumb, and that the track is true, is to move the carriage up until the headblock is on a line with the front edge of the saw; take a pointed stick or sharp instrument and lay it upon the headblock, placing the point lightly against the saw; then move the carriage back until the point is opposite the back edge, and if the saw is properly lined with the carriage, the point should clear the saw from 1-64 to 1-32 of an inch.

After trying the saw as above, by turning the same a quarter of the way round, and repeating the operation, any imperfection in the saw will be shown.

Saw arbors should have from 1-64 to 1-32 of an inch end motion, and should *never be run rigid.*

The guides should be placed near the roots of the teeth, and should as a rule, be run close.

Care should be taken that the spread wheel be on a line with the saw. Poor lumber is often the result of oversight in this direction. Set the spread wheel full flush with the face of the saw, and half an inch clear of the teeth.

The tendency of all circular saws is to grow large on the rim as they wear away, and saws in this condition can be used by leading the saw out of the log a trifle, which causes the log to bear on the centre of the saw, heating and thus expanding the centre to counterbalance the expanded position of the rim.—*From the Catalogue of the Simonds Manufacturing Co., Fitchburg, Mass.*

THE SEASON IN THE WOODS.

The prospects of the lumbering business for the approaching season are not favorable. All the operations in the back country will be greatly reduced, and in every branch the production will be very limited. Our back country friends will do well to prepare for a considerable curtailment in all lumber operations, which means low wages and low prices for the farm products they have been in the habit so many years of supplying to the lumber shanties. It appears probable that there will not be half so much lumbering as was done last year,—and last season the work was done not by any means extensive. The three firms, Hilliard, of Peterborough, Smith, of Fenelon, and Boyd, of this village, according to report, will confine their operations to small limits, and the other firms will do but little. The cause is to be found in the lack of American demand for lumber. For clear stuff the demand is fair and the price good, but for common lumber the price is not only low, but the demand is very slight. In fact the lower qualities can not be sold at all. This depression will probably be only temporary, and after the close of the Presidental contest, business will be resumed and a better demand arise, but it will be too late to effect this year's operations, and the large firms are acting wisely in shutting down and reducing the season's cut to the lowest point possible. The Georgian Bay Lumber Company will lessen its output of logs to one-half its usual quantity, whilst the British Canadian Lumber Company will close entirely for the season. It may be that in this district the output will reach one-half of that of last season, but it is quite possible it may not reach more than one-third. Our back country friends should bear this in mind, and govern themselves accordingly.—*Bobcaygeon Independent.*

Staining Pitch Pine.

Pitch pine has a strong tendency to quickly get darker in color. This arises chiefly from the effect of the air upon the turpentine and resin contained in the wood (just as varnishes get dark by exposure), and therefore, except the work is required of a dark color to begin with, it is advisable that no stains be used on the mass of the work, and that the varnish used be as light-colored as it is possible to be got, for if we varnish with a common dark-colored varnish the wood will all the sooner become discolored.

MATTERS IN MAINE.

The *Mining and Industrial Journal*, of Bangor, Me., dated September 19, had the following in regard to the log and lumber trade on the Penobscot: "Spruce logs have been and are now held at such a high price here that sawing them into lumber is not very profitable in an instance, and in some cases is a losing business; and for this reason nearly all the mills on the Penobscot are running on one-half capacity, while several, Hodgkins, Hall & Co.'s and D. Sargent's Sons' (upper mill) among others, are shut down entirely. Probably one-third of the operatives have been discharged, and those now employed have suffered a reduction of 10 to 25 per cent. in wages. The price of random spruce is nominally $11 per thousand, although a cargo in the dock has been sold at $10 and an order to saw taken at $10.50. Frames are worth $11 to $13 per thousand. Nearly all the tidewater mills have good stocks of logs for fall and winter, and most of the up river mills have good fall stocks. There is perhaps 10,000,000 feet of spruce in the market, for which good prices have been offered and refused. There is a general impression that these logs will not bring as much this fall as they would have last summer; in fact many of the manufacturers have curtailed their production to save the logs they have in stock for next spring, rather than go on and pay the prices at present asked in order to obtain stock to winter over. The entire stock, old and new logs, in 1883, was about 200,000,000 feet, of which 161,000,000 was manufactured. This year the total stock will be about 170,000,000 feet, of which probably 140,000,000 will be sawed, a decrease of over 20,000,000 feet from last year. There are more orders here now than a month ago, but, while only one-half as much spruce is being sawed now as there was six weeks ago, the price does not improve."

A WELL-KNOWN FIRM.

The *Timber Trades Journal* has the following in reference to a well known firm of London and Quebec:

"Messrs. Bryant, Powis, & Bryant appear to have appropriated the lion's share of the pine trade in London. We observe by their advertisement which appears in this paper that they hold stock at fifteen different yards distributed around the metropolis, this too in addition to their Surrey Commercial Dock stocks, the large proportions of which any visitor to that great wood depot soon becomes aware of.

Albion and Canada yards, in the docks mentioned, are mostly occupied with the pine stocks belonging to the said firm, and the majority of the vessels from Quebec discharging in the various London docks throughout the season are for their account, as shown by our import list for several seasons past.

In the system of doing business which this enterprising firm have adopted they have acted on somewhat original lines with a considerable amount of success. The present steadiness of pine in the London market is in a great measure due to the fact of the fluctuations in the demand being carefully studied, and holders, while quoting sufficiently moderate prices to be in keeping with the times, showing no inclination to press sales, which their position does not render necessary. The Messrs. Bryant, of the firm alluded to, are the same gentlemen who have achieved such a splendid success as Bryant & May. This gigantic undertaking has within the past three months been floated as a limited company, and we notice in the daily press the £5 shares are already at 8½ to 8¾, and the five per cent. debentures are quoted at a premium of £5."

Fast Logging.

The Minden *Echo* tells of a logging-bee at Mr. A. J. Archer's, lot 8, con. 4, Minden, on Tuesday, at which there were three teams of horses employed, two of them working eight hours and one only five hours. They were assisted by twelve men. The men and horses logged in ten hours no less than six acres and six rods of heavy pine fallow. Evidently the men were brawny and the horses well used to the work of drawing.

Subscribe for the CANADA LUMBERMAN.

Chips.

GILMOUR'S Big Mill at Trenton has closed down.

THE steam barge Nevada threw overboard 200,000 feet of lumber in a recent gale on Lake Erie.

A FIRE on the night of Sept. 30th in the yard of J. G. Frazer, Williamsport, destroyed $200,000 worth of lumber belonging to different parties.

A SAW and grist mill at McDonald Station, Pa., belonging to John and George McDonald, was burned September 19. Loss, $15,000 to $18,000 with no insurance.

FOREST fires raged in the woods between Montauk and Amagansett, L. I., N. Y. Several hundred acres were burned over and destroyed, with a loss exceeding $50,000.

ON Sept. 20th an employee of the Consolidated Lumber Company, named Brown, was struck on the head and killed, by a limb of a tree he was felling, in the vicinity of Sparrow Lake.

A RAFT of walnut logs, valued at $40,000, has recently reached New Orleans, where it will be sawed into boards and then shipped north, to be converted into sewing machines.

ABOUT $5,000 worth of chestnut and maple lumber, lying on the canal bank, two miles from Dunnville, Ont., was burned September 16th. G. P. Moore, of Welland, owned the lumber.

ON Sept. 27th, Hector Chateauvel, aged 66, of Hull, was killed in Mr. E. B. Eddy's South Shore mill, by falling on a circular saw in motion. He was frightfully lacerated and died almost instantly.

C. G. KING & Co., of Cleveland, by circular letter announces their retirement from the lumber business, and the sale of their yard, docks, and the good will of the business to Woods, Perry & Co.

ALBANY, N. Y., one of the largest distributing centres in the country has sold 14,000,000 feet more lumber to September 1st than was sold up to the same date last year. At least this is the claim put forth.

LUMBER arrivals at Port Arthur are almost in the same condition. Two or three cargoes will probably represent the bulk of the imports for the balance of the fall. Lumber merchants are rejoicing that they are not caught to pay last fall's high freights.—*Sentinel.*

SAMUEL J. TOMLINSON, who lately purchased the Detroit *Evening Journal*, made his money, which is said to be a snug pile, as a speculator in Ogemaw county, Mich., pine lands. He began his newspaper career as owner of the *Clarion*, in Lapeer county, on a capital of $300.

LATELY Duluth elevators have been receiving wheat at the rate of from 200 to 250 car loads a day. Evidently many of the farmers along the Northern Pacific and Manitoba roads have resolved to sell their wheat this fall. The lumber trade in north Minnesota and Dakota is deriving some benefit from the wheat movement.

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c, measured and culled to date:—

	1882.	1883.	1884.
Waney White Pine..	2,201,705	2,565,302	1,929,145
White Pine.....	7,161,367	5,338,537	3,493,102
Red Pine.....	1,329,262	386,708	299,751
Oak.....	1,052,977	1,428,630	706,100
Elm.....	635,205	302,526	644,073
Ash.....	243,301	223,471	380,017
Basswood	1,273	1,244	3,992
Butternut.....	2,585	1,028	1,121
Tamarac.....	12,445	5,159	18,863
Birch & Maple.....	268,282	138,766	195,175
Masts & Bowsprits...	33pcs	—pcs	—pcs
Spars.....	51 pcs	—pcs	41 pcs
Std. Staves.....	320.2.3.29	541.1.2.18	45.6.3.26
W. I. Staves.....	1066.0.0.28	453.4.0.26	78.2.2.10
Brl. Staves.....	71.9.1.9	87.2.0.3	0.6.2.13

JAMES PATTON,
Quebec, Sept. 26. Supervisor of Cullers

THE redwood forests in California are said to be yearly diminishing, as this wood is increasingly used in building on the Pacific Coast. The superstructure of most dwellings in San Francisco is of redwood, and the 'Friscans cherish the belief that it does not burn as readily as other light material.

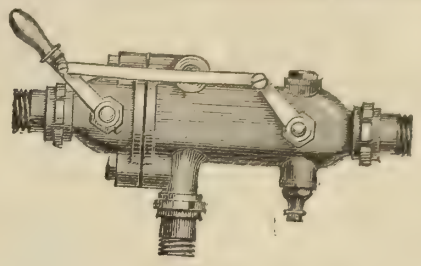
ROBERT MITCHELL & CO.

Montreal Brass Works,

St. Peter and Craig Streets, Montreal.

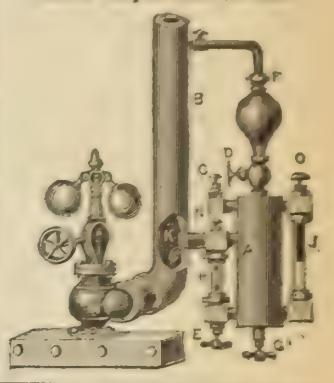
THE KORTING INJECTOR

Acknowledged to be the Best Boiler Feeder in the World.



Will lift 20 feet, and take water at 150 degrees. Only one handle to start and stop. No valve to regulate. CHEAPER than any other Injector in the market. Also, PATENT EJECTORS fo conveying Water or Liquids. CIRCULARS ON APPLICATION

The Continuous Feed Lubricato Saves 50 per Cent in Oil.



HUGH GIBSON,

MANUFACTURER OF

KNIGHT'S PATENT "EXCELSIOR"

SAW MILL DOGS



The Sawyer's Favorite

For Holding Logs upon a Saw Mill Carriage while being Sawn into Lumber.

MISSISSIPPI, June 7th, 1883.

HUGH GIBSON, ESQ.,—Your Patent Excelsior Mill Dogs give entire satisfaction, and is certainly up to your recommendation. They are the best Mill Dog in the market. I am very much pleased with them.

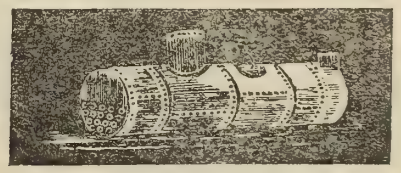
Yours Respectfully,
PETER McLAREN.

BERKLEY, April 20th, 1883.

HUGH GIBSON,—SIR,—The Dogs I bought of you give satisfaction. They beat any Dog that I ever saw for ripping or edging lumber on carriages. They are just the thing for scantling. I would not take $50 for them to-day and have to wait for another pair to come from you, because I believe they make two dollars a day for me.

Yours truly,
2t1y GEO. S. BROWN, JR.

Manufactured by HUGH GIBSON, CHATHAM. EXCELSIOR DOG.



(ESTABLISHED 1852.)

CURRIE BOILER WORKS

MANUFACTURERS OF

Steam Boilers

NEW and SECOND HAND ENGINES

and other Machinery on hand and for Sale.

CURRIE, MARTIN & Co.

Esplanade, Foot of Frederick Street, TORONTO.

2t1y

PLANER KNIVES, Stave Cutter, Stave Jointing, Shingle do, Cheese Box, Veneer Cutting, Paper Cutting, Leather Splitting, Moulding and Tenoning Knives.

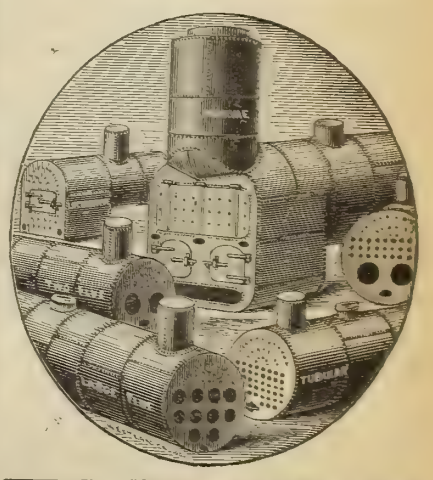
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1y11 PETER HAY, Galt.

AGENTS wanted for The Lives of all the Presidents of the U. S The largest, handsomest, best book ever sold for less that twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people Tant it. Any one can become a successful agent terms free. HALLETT BOOK CO., Portland Maine.

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Manufacturers of all kinds of STATIONARY, MARINE and LOCOMOTIVE



BOILERS

And SHEET IRON WORK.

SECOND-HAND MACHINERY Bought, Sold or taken in exchange for new work. ☞REPAIRS PROMPTLY ATTENDED TO. All Boilers Tested by cold water pressure to 150 pounds to the square inch.

DOCK and WORKS:—

Sandwich Street, Windsor, Ont.

L2t

Market Reports.

TORONTO.

From Our Own Correspondent.

Oct. 9.—During the last two weeks seventeen vessels have cleared from this port with cargoes amounting in the aggregate to 3,000,000 feet, nearly all of which was shipped to Oswego, N. Y. Another months shipments will about close up the season's work, and I fear it will be found on the entire season's shipments to have been far from a profitable year's trade. Prices have kept at rock bottom during the entire season; especially has this been the case on all the lower grades of lumber, a market for the higher grades with fair figures can be found at nearly all times, and if our stocks yielded uppers to as high a percentage as in former years there would be but little to complain of, but unfortunately such is not the case, and it costs the mill man just as much to cut and market a stock of inferior logs as it would if the stock run one-half into uppers. This is just where the trouble comes in.

Our retail men, most of them at least, report a fair amount of trade, but prices are badly cut up. It seems to have just come down to the point that the lowest tender takes the order, and in four cases out of six the dealer has to lien the building in order to have any show of obtaining his money, and often after doing this leaves 50% of his claim in the building, and until we have a better lien law this will contiuue to be the case. Competition both in the wholesale and retail trade is much keener now than ever known before in this city, and it is doubtful if more than two or three dealers could be found here who are making any money out of their business at present.

The railroad companies here still keep up the obnoxious charges for shunting to the western confines of the city. To show you how unjust and unfounded such claims are on the score of extra services rendered by the company, I will cite a case coming under my own observation: Two cars of lumber from Midland consigned to Parkdale came into the Toronto yard, along with them came two more consigned to Toronto, Charges on the two former $40.80, the latter two afterwards sold to dealers in Parkdale, charges $45.80. A car checker placed labels on the four cars at the same time—no more labor performed on account of the latter two cars being shipped to Toronto than with the former consigned to Parkdale, but the dealer lost half his profits and the company pocketed the same without rendering any extra service therefor. So much for monoply. Either of the railroad companies would have sent those cars the same distance in an opposite direction without extra charge, although it would have involved more labor in doing so.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
Scantling and joist, up to 16 ft	13 50
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 00
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	20 00
" " " 32 ft	21 00
" " " 34 ft	22 50@22 50
" " " 36 ft	24 00
" " " 38 ft	27 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	24 00
" boards "	20 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 00
Three uppers, Am. inspection	35 00@40 00

B. M.

1½-inch flooring, dressed	30 00
1½ " " rough	16 00
1¼ " " dressed	25 00
1¼ " " undressed	15 00@15 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	2 90
Sawn Lath	2 75

MONTREAL.

From Our Own Correspondent.

Oct. 9.—Business continues dull, the weather being much against it, as the wet season has set in much earlier than usual. Still there is a certain amount of fall business to be done before the close of navigation, but owing to the weather being so wet it cannot be proceeded with. Good lumber still keeps high and apparently will maintain its value as dry stock is scarce and hard to get. We cannot make any change in our quotations which are steady as follows:—

Pine, 1st quality, ℔ M	$35 00@40 00
P ne, 2nd " ℔ M	22 00@24 00
Pine, shipping culls, ℔ M	14 00@16 00
Pine, 4th quality deals, ℔ M	10 00@12 00
Pine, mill culls, ℔ M	7 00@ 9 00
Spruce, ℔ M	10 00@13 00
Hemlock, ℔ M	9 00@10 00
Ash, run of log culls out, ℔ M	15 00@18 00
Bass, " " ℔ M	15 00@20 00
Oak, ℔ M	40 00@50 00
Walnut ℔ M	60 00 100 00
Cherry, ℔ M	60 00@80 00
Butternut, ℔ M	25 00@35 00
Birch, ℔ M	20 00@25 00
Hard Maple, ℔ M	25 00@30 00
Lath, ℔ M	1 75@ 2 00
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 50@ 0 00

SHIPPING.

Shipment for the past two weeks have been rathor dull, nearly all the vessels chartered for South America will soon be loaded and cleared, and we hear of no new engagements. The Crown Prince has been chartered for deals to London at 50s. The recorded shipments since the date of our last report are as follows: SS Carmona for London, 12,484 boards, 6,984 ends; SS Castle Crag for Liverpool, 26,318 deals, 2,297 ends and 10,000 feet of lumber; SS Sarnia for Liverpool, 6,602 deals and 10,308 boards; SS Colina for Glasgow, 4,779 deals; Bk Mary E. Russell for Buenos Ayres, 412,524 feet pine lumber; Bk Jane Ferguson for Monte Video, 435,120 feet pine lumber; SS Ontario for Liverpool, 6,925 deals and 7,245 boards; Bk Memlo for Buenos Ayres, 801,755 feet lumber; Bk Fairy for Bristol Channel, 400,082 feet; SS Marana for Glasgow, 14,014 deals; SS Concordia, for Glasgow, 19,607 deals and 2,122 ends; SS Abington for London, 55,146 pcs. boards; SS Parisian for Liverpool, 3,838 deals; SS Brooklyn, for Liverpool, 10,094 deals and 7,847 boards.

CORDWOOD.

There has been a fair steady demand for wood during the past two weeks and although the stock on the wharves is considerable, from all appearances it will not do more than meet present demands. Prices are firm but unchanged. We quote at the wharves ex cartage as follows:

Long Maple	$ 6 00
Long Birch	5 50
Long Beech	5 00
Tamarack	4 50

WINNIPEG.

The *Commercial* says:—Business in lumber is still rather discouraging. Some merchants report a fair trade, while others speak very discouragingly. As the season is far advanced, there is no doubt but business will be slow for the coming winter. Outside centres of trade give no encouragement for anything else.

BOSTON.

The *Journal of Commerce* of Oct. 4th says: General trade remains very quite and without any noteworthy change. The yards are carrying light stocks, but are not disposed yet to order heavily while matters are so slow. The furniture factories have started up but their trade is not very active thus far.

Spruce is selling very moderately at easy prices, with some cargoes on the market. Hemlock is moving fairly at steady prices. Fine common and better grades of white pine are in scant stock and steady and quiet, while coarse grades are in large stock and slow of movement. Yellow pine is in very limited call, and dull and low, about the only demand being for flooring. Walnut and whitewood are in moderate demand at steady prices for desirable grades. Ash is in limited stock.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

CHICAGO.

AT THE DOCKS.

The *Northwestern Lumberman* of Oct. 4th says:—The arrivals of cargoes during the week ended Wednesday night numbered 213, as compared to 204 in a corresponding month last year. An unusual proportion of the total arrivals has stopped at the market docks. On Thursday there was about thirty-five cargoes moored at the market—a large number for a day in mid-week. On Wednesday the port list showed that 56 vessels had put in an appearance, so that the Thursday offerings at the market were numerous proportionately to the current arrivals. More piece stuff than formerly is also coming. The market is crowded with it, and some that is of rather low grade. The amount of piece stuff thrown upon the commission men to dispose of has given them a hard tussle to hold it up, and at length they have been compelled to succumb to the pressure. The overload comes largely from Muskegon, and it is said the late heavy arrivals are owing to the fact that the low grade logs that are now running through the mills are being sawed into piece stuff and shipped to market directly from the saws, in order to leave room for the good lumber that must go into pile. As a consequence of this rush of piece stuff, the market has broken down at least 25 cents, short dimension now being offered openly at eight dollars, and selling slowly at that. Occasionally a cargo is held for $8.25, but on Thursday we heard of no sales at that figure, and a commission man frankly confessed that it would require a very good cargo to bring that price. In fact, the market on dimension was declared utterly flat, with no certainty that the bottom was reached. It was thought, however, by some, that when the east shore shippers came to a full realization of the condition of the market, they would withhold shipments, especially from Manistee. But, since lumber of all sorts is accumulating at the mills, not only on this lake but on Lake Huron, and the yard trade on piece stuff is largely cut off in Kansas, Nebraska and Iowa by river and northern competition, it is likely that the market for this class of lumber has seen its highest notch for the season, but nobody can say that it has reached its lowest range. Unless trade out of the yards very much increases, piece stuff on the market is liable to drop off 25 or 50 cents below present prices.

Inch lumber suffers a little from the decline in dimension. Actual selling prices are not quotably lower, but the market is tame, and purchasers are inclined to be extra fastidious about cargoes, and try to buy lower than a few days since. It is likely that sales are made at figures that indicate a lower range than that of our quotations. The tendency is certainly to weakness on all No. 2 stock, and nothing has happened to prevent the same tendency in No. 1 lumber.

Quotations are as follows:—

Piece stuff, green	$ 8 00@ 8 25
Long timber, green	9 75@11 25
Coarse common	9 00@ 9 50
Boards and strips—No. 2 green	9 50@11 00
Boards and strips Medium, green	11 00@15 00
Boards No. 1, green	15 00@18 00
High grade	18 00@22 00
Shingles, standard	1 75@ 1 85
Shingles, Choice	1 90@ 2 00
Shingles, extra	2 00@ 2 20
Shingles, clear	2 80
Shingles, cedar	1 35@ 1 75
Lath	1 25@ 1 40

LAKE FREIGHTS.

Grand Haven by steam	$ 1 12½
" " sail	1 25
Muskegon by steam	1 12½
" " sail	1 25
Whitehall	1 37½
Ludington	1 50
Manistee	1 62½
Menominee dry	1 50
" green	1 62½
Oconto	1 62½
Cheboygan	1 37½
Alpena	1 75
Bay City	2 00
Frankfort	1 62½

AT THE YARDS.

Though the yard merchants continue to complain of dull trade, there is quite a heavy outward movement of lumber. Nearly every yard track has a respectable sized train on it, and and the forces kept busy loading. Some of the heavier shippers are decidedly busy, and tracks of such are crowded with loading cars, while long trains are being pulled out frequently. It is plain that the dealers are complaining a little more than they have good reason for, so far as concerns the volume of trade. While there is no rush, it must be that the aggregate of shipments will show favorable with the correspond ing time for the past two years. Without a doubt shipments during September as a whole were lighter than they were in the same month last year; but within two weeks there has been a manifest increase, though not of such a sudden and voluminous character as to forcibly impress individual dealers with its aggregate extent, or to give them satisfaction with the state of trade.

Prices on all yard stocks, with the exception of shingles, are in the mellow and uncertain state that characterized them for some time back, with a tendency, if anything, toward a further weakness.

Shingles are doing relatively much better than lumber. Within a few days prices on all the well known leading brands have advanced from 15 to 20 cents a thousand, little opposition to the payment of the advance being manifested. The higher prices on the cargo market had an effect on yard prices.

Receipts of lumber, shingles, etc., from Jan. 1st to Oct. 1st as reported from the Lumberman's Exchange:—

RECEIPTS.

	Lumber.	*Shingles.*
1884	58,844,000	22,696,000
1883	69,651,000	27,250,000

FROM JANUARY 1, 1884, TO OCT. 1, 1884, INCLUSIVE.

RECEIPTS.

	Lumber.	*Shingles.*
1884	1,405,180,000	672,924,000
1883	1,433,504,000	898,349,000
Decrease	28,324,000	22,425,000

LAKE RECEIPTS FROM JAN. 1 TO OCT. 1.

Lumber	1,291,546,000
Shingles	645,777,000
Lath	47,561,000
Posts	2,291,816
Railroad ties	765,807
Wood, cords	21,791
Bark, cords	29,940
Slabs, cords	28,927
Telegraph poles	132,896
Piles	500
Spars	12

STOCK ON HAND SEPT. 1.

	1884.	1883.	1882.
Lumber & timber	607,163,629	576,384,049	580,820,533
Shingles	352,022,268	371,285,690	226,806,750
Lath	59,225,900	59,941,215	42,286,432
Pickets	1,396,689	1,888,936	2,678,476
Cedar posts	483,069	473,402	218,309

FREIGHT RATES TO EASTERN POINTS.

Chicago to—	
New York and common points, per 100 pounds	30c.
Albany	27c.
Boston and common points	35c.
Philadelphia	28c.
Baltimore	27c.
Washington	27c.
Buffalo and Pittsburgh	17½c.
Erie, Pa	17½c.
Dunkirk, N. Y.	17½c.

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ℔ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	45 00@50 00
Pine, good box	22 00@25 00
Pine, common box	13 00@16 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 22@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 21
Pine, 10-in. boards, 16 ft., ℔ M	28 00@32 00
Pine, 12-in. boards, 16 ft	28 00@32 00
Pine, 12-in. boards, 13 ft	28 00@32 00
Pine, 1¼ in. siding, select	40 00@43 00
Pine, 1¼-in. siding, common	20 00@22 00
Pine, 1-in. siding, select	42 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Black walnut, gook, ℔ M	100 00@120 00
Black waluut, ¾ inch	80 00@90 00
Black walnut, ¾ inch	00 00@85 00
Scaymore, 1-inch	30 00@32 00
Scaymore, ¾-inch	23 00@25 00
White wood, 1-inch and thicker	38 00@43 00
White wood, ¾-inch	30 00@32 00
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@85 00
Cherry, common, ℔ M	25 00@30 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	38 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	4 50@ 4 50
" clear, "	0 00@ 3 00
" cedar, mixed	0 00@ 3 30
" cedar, XXX	0 00@ 2 00
" hemlock	0 00@ 2 00
Lath, hemlock, ℔ M	0 00@ 2 00
Lath, spruce, "	0 00@ 2 25

TONAWANDA.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$42 00@46 00
Common	17 00@18 00
Culls	11 00@14 00

BUFFALO.

We quote cargo lots:—

Uppers	$45 00@46 00
Common	17 00@18 50
Culls	12 50@13 00

OSWEGO, N.Y.

From Our Own Correspondent.

Oct. 9.—No particular change in general quotations, some sales of box have been made under price. Trade is slow, receipts of coarse lumber have been heavy since our last; lake and canal freights are steady and no prospect of an advance. The prevailng opinion is that trade must be light during the fall.

Three nppers	$42 00@46 00
Picking	32 00@35 00
Cutting up	22 00@25 00
Fine Common	20 00@22 00
Common	14 00@18 00
Culls	11 00@14 00
Mill run lots	16 00@22 00
Sidings, selected, 1 in	30 00@35 00
" 1½ in	32 00@36 00
Mill run, 1x10, 13 to 16 ft	16 00@21 00
Selected	21 00@24 00
Shippers	14 00@16 00
Mill run, 1½x10	17 00@20 00
Selected	21 00@30 00
Shippers	14 00@16 00
Mill run, 1 & 1½ in. strips	15 00@18 00
Selected	22 00@30 00
Culls	11 00@13 00
1x7 selected for clapboards	25 00@35 00
Shingles, XXX, 18 in. pine	4 00@ 4 55
Cedar	3 00@ 3 50
Lath, No 1	2 00@ 2 20
No 2	1 75@ 2 00

GLASGOW.

The *Timber Trades Journal* of Sept. 27th, says:—The import to Clyde still continues to be upon a moderate scale, the list for the past week showing no arrivals at Greenock, which is somewhat unusual at this time of the year. The total tonnage employed in conveyance of wood goods to Clyde ports exhibits a marked decrease this year to date compared with last, and there are few vessels this fall open to charter. There are no anxious charterers, although freights are extremely low, and it is clear this year's total import will be comparatively a small one, yet sales continue to be made only upon very tempting conditions for buyers.

The spruce deal market shows little signs as yet of decided improvement, but the time approaches when, as a general rule, there is always a larger consumption of this class of wood.

There has just been landed here, per steamer, a superior cargo of Michigan bright pine deals, 1st quality, of large dimensions, consigned to Messrs. Edmiston & Mitchells, who will likely have them brought to market on an early day.

There has been one public sale during the week at Port Glasgow. There was a good attendance and fair amount of business done. Particulars are appended.

AUCTION SALE.

On 18th inst., at Greenock, Messers. Hunter, Sheriff, & Co., Brokers:—

Quebec waney boardwood—		
70 c. ft. av. per log	2s. 6d.	p. c. ft.
40 "	1s. 7d.	"
Do. yellow pine—		
50 c. ft. av. per log	1s. 3d.	"
Do. yellow pine beam fillings—		
25 & 30 c. ft. av. per log	1s. 2d. & 1s. 2½d.	"
Do. red pine—		
25 to 40 c. ft. av. per log	1s. 1½d. & 1s. 2d.	"
Sawn pitch pine—		
35 c. ft. av. per log	1s. 1¾d.	"
Pitch pine planks—		
3 & 4 in. thick	1s. 0½d. & 1s. 0½d.	"
Quebec 1st. pine deals—		
12 ft. 12/18×3	3s. 4d.	"
12 & 13 ft. 11×3	2s. 11½d.	
Do. 3rd pine deals—		
10 to 12 ft. 11/20×3	1s. 6d.	
14 & 15 " 11×3	1s. 1d.	

LIVERPOOL.

The *Timber Trades Journal* of Sept. 27th says:—The sudden change of wind has brought up a fleet of vessels laden with timber, deals, &c., about thirty sail from various ports having arrived; so that we may expect a considerable amount of liveliness on the dock quays in the way of discharging, storing, or shipping off orders.

It is understood that a very large proportion of these have been sold before arrival, especially those laden with spruce deals. The other shipments are of flooring, Baltic fir, mahogany, and a cargo of Moulmein teak; so that the import presents a very diversified aspect. He would be an exacting customer who failed to find what he required from the stocks here now.

In prices there is virtually no change, the sales by private treaty as well as those by public auction showing little if any change from those recently current.

There is some talk of business showing an indication towards improvement, but it has so far not exhibited itself in the timber trade in any practical shape, and we may perhaps not be long in assuming that "the wish is father to the thought."

The only public sale of timber yet unrecorded was on Friday the 19th inst., when Messrs. Farnworth & Jardine sold 1,038 logs of Halifax birch, which sold fairly well, but chiefly in large quantities, at about the following prices:—

Halifax birch—		per ft.
22 in. & up. deep	2s. 4d. to 2s. 4½d.	"
21 in. & under 22 in. deep	1s. 8½d.	"
20 in. " 21 in. "	1s. 7d.	"
19 in. " 20 in. "	1s. 6½d. to 1s. 7d.	"
18 in. " 19 in. "	1t. 5d.	"
17 in. " 18 in. "	1s. 4½d.	
16 in. " 17 in. "	1s. 3½d.	"
15 in. " 16 in. "	1s. 2½d.	"
Under 15 in. "	1s. 1d. to 1s. 1½d.	"
Planks	1s. 0¾d. " 1s. 1½d.	"

TYNE.

The *Timber Trades Journal* of Sept. 27, says:—The arrivals of the past seven days have been the smallest for several weeks, and cover no one item of any special importance. So far the imports of the season are falling very far behind the record of the past year, the figures by your last published returns showing the total imports of the Tyne to be nearly 20,000 loads short of the imports of 1883. The figures at first sight appear alarming, but on investigation it will be found that on the whole stocks are smaller than they were at this time last year, at any rate of sawn goods. Much less pitwood has been imported, a matter satisfactory in itself. The greatest amount of falling off will have been in whitewood deals and American wood used in the shipbuilding trade. Practically, the great bulk of shipments are now made as with the quantity of steamers now engaged in the trade, the shipments are made much earlier, and importers thereby avoid the heavy rates of insurance, besides getting the goods forward in a very much better condition.

Prices have scarcely varied at all this season, and almost everything is at the moment stationary.

THE CELEBRATED COOK'S FRIEND BAKING POWDER.

Is the Best and Most Economical article in use for raising all kinds of Biscuit, Rolls, Pancakes, Johnny Cakes, &c. It is made from the BEST MATERIALS MONEY CAN BUY, and is perfectly pure and wholesome. Bread ready for the table can be prepared by its means in TWENTY MINUTES after wetting the flour. ☞Next to salt it is the most useful adjunct to camp supplies.

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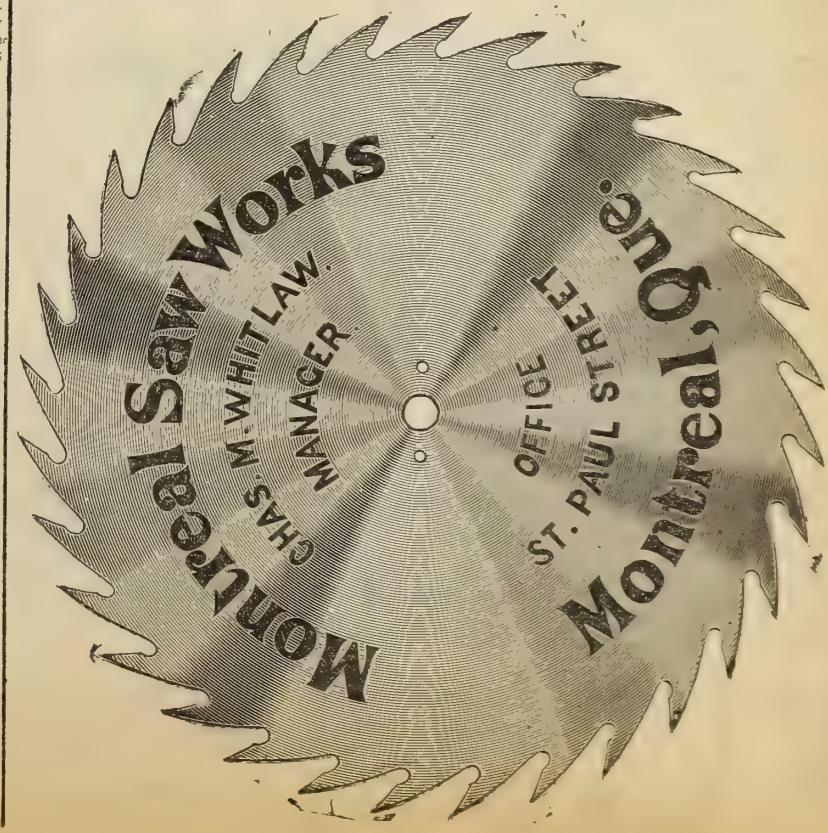
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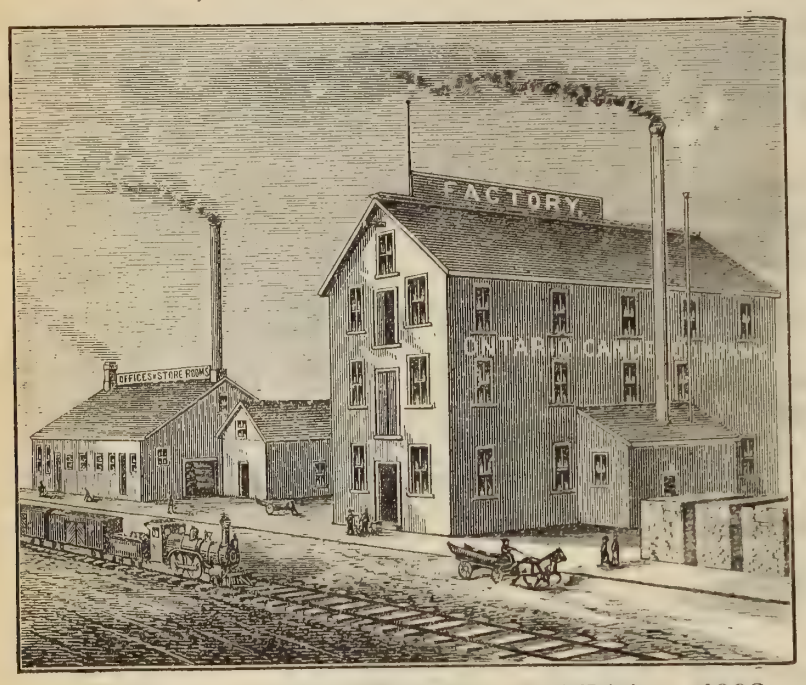
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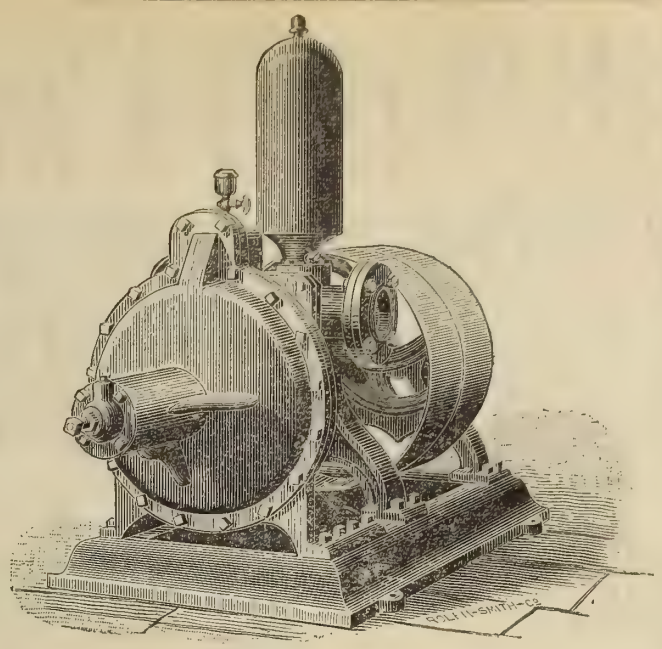
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4	5 "	4 "	250	400	225

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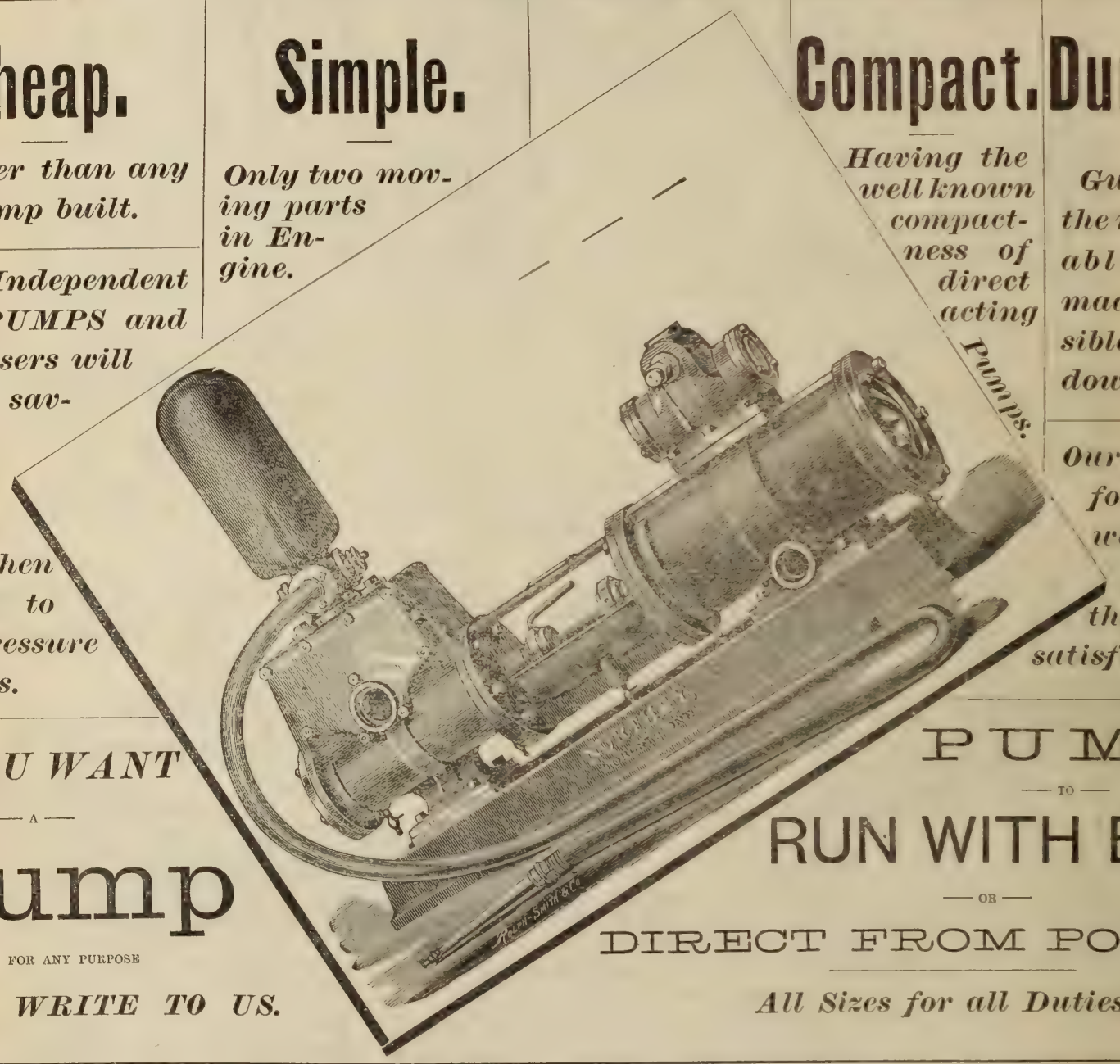
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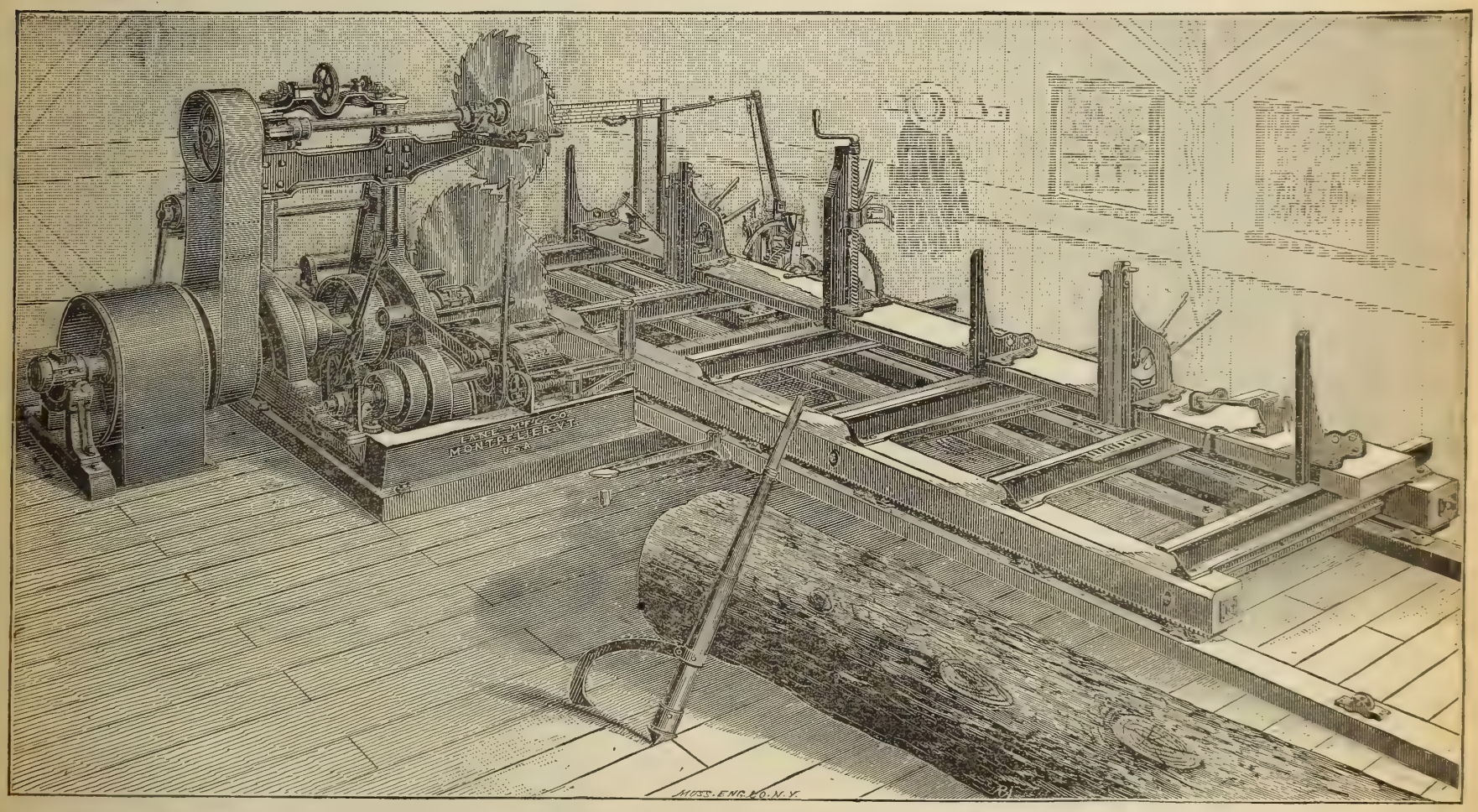
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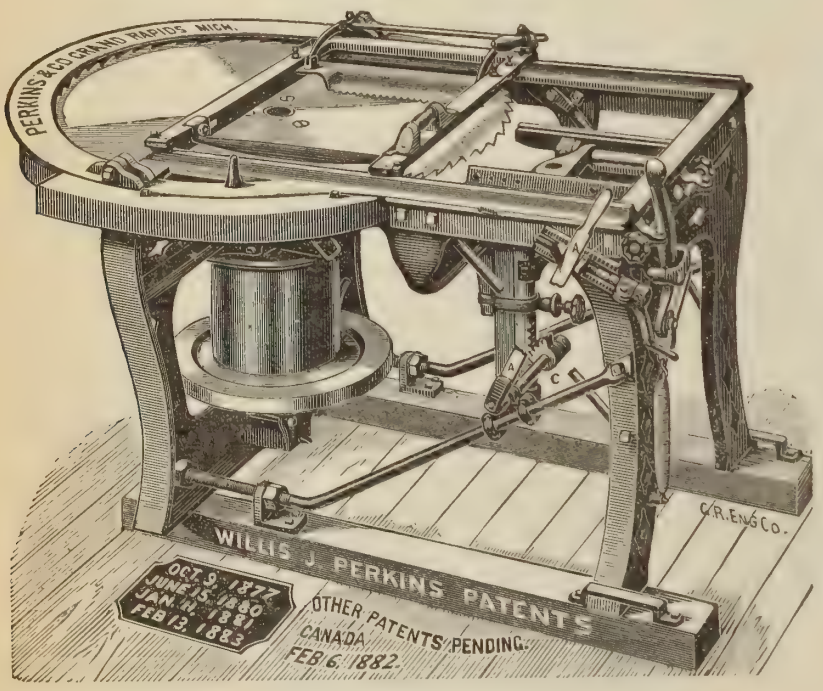
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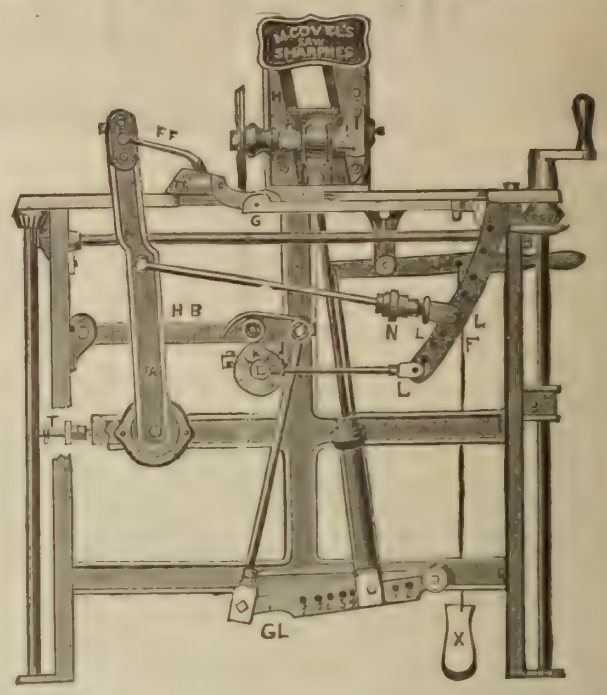
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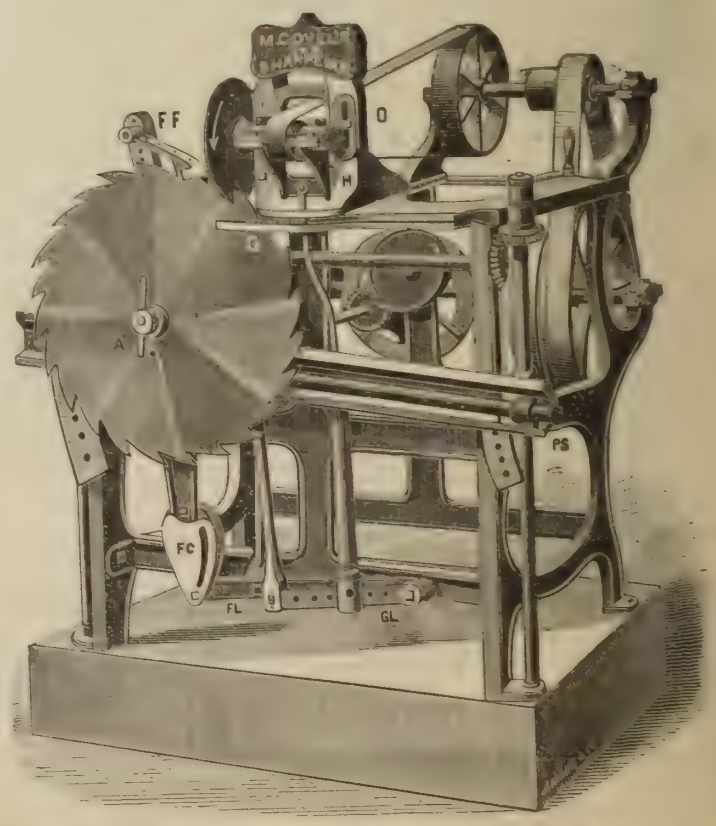
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Knots, rots, hearts, bolt squared rift-ways, and all irregularities cut off at one clip. This improvement will pay the price of the whole machine every season by increase of quality and quantity cut

The M. Covel Patent Saw Sharpener.



The above Cut No. 1 shows some very important changes that have lately been made, which makes the machines far less complicated for new beginners to operate. Cut No. 2 shows this machine with a circular saw upon it ready for operation.



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VOL. 4. PETERBOROUGH, ONT., NOVEMBER 1, 1884. NO. 21.

OTTAWA LUMBER TRADE.

The following, from a letter of the correspondent of the London *Times* who accompanied the British Association to Canada, shows how the Ottawa lumber manufactures are viewed by a stranger :—"Without touching on the applications in this way to their waterworks, it will be interesting to allude to the enormous lumber trade of Ottawa. One of the most interesting excursions of the association was to the capital of the Dominion, and an inspection of these works was a surprise to most of the members. From the heights of the Parliament House, hundreds of acres around the Chaudiere Falls are covered with vast stacks of lumber, which had been carried from the interior by the river. At the time of our visit 25 large barges were being loaded. Nothing but water power is used, and this is employed to the extent of several thousand horse power by means of turbines. The logs are drifted up to a sloping side along which an endless chain with hooks attached is continually running. Thus they are dragged up to the floor of the saw mill. They are then moved by water power to position and sawn by to-and-fro saws of from six to twenty in a machine, into planks. The waste sides of these planks are cut off in a separate machine. The ends are cut off and sent to the match factory. The waste sides are passed to another room to be sliced into laths for building, and thus every available piece of wood to the smallest size is used up, and only chips are thrown away. The small number of workmen employed on so huge a mass of material, which passes through the mill from the state of logs 3 ft. in diameter to the state of mathes and laths, was a matter of astonishment to our most distinguished engineers."

THE TIMBER ON MANITOULIN ISLAND.

A correspondent of the Toronto *Globe* has made a thorough tour of Manitoulin island, in the northern portion of Lake Huron, and was much impressed by its extent—90 miles long and 25 miles wide on a average—its bays, lakes, rivers of pure water, its rich agricultural lands, stock and dairying capabilities, healthy climate, and, especially, its timber. In reference to the latter he says :

"The timber on Manitoulin island is perhaps somewhat better than that of Muskoka or Parry sound. The trees are much the same size as in these districts. Unfortunately fire has ravaged the forests and destroyed much valuable timber ; and this, together with the great quantities which have been taken away, render it much less abundant than it was a few years ago. Still there is a good deal of valuable timber remaining, and many saw, shingle and lath mills do flourishing business in reducing it to forms adapted to the use of mankind. Pine, cedar, spruce, maple, black birch, yellow birch, white birch, white poplar, rough bark poplar and whitewood are to be found in considerable quantities, while white oak, hemlock, balsam, tamarac and basswood, though not so plentiful, are by no means scarce. Saw mills are situated at the following places, and many of them are doing a large business, while the remainder are doing very well : Michael's bay, on south shore of island, large mill, driven by waterpower ; township of Sansfield, McDonald's mill, driven by water power ; Providence bay, on south shore, water power ; Manitowaning, on the north shore of the island, steam power ; She quiandah, on the north shore, water power ; Little Current, steam power ; Kogawong, on north shore, water power ; Gore bay, on north shore, two steam mills ; township of Burpee, near south shore, steam power ; Meldrum bay, western portion of island, steam power. In connection with most of these mills will be found lath and shingle mills, while Gore bay boasts of a separate shingle mill. The Manitou, Mindemoza, Black and Kagawong rivers afford excellent water power to drive the saw and grits mills to be found on their banks. The timber on Manitoulin is a great boon to the settlers ; it renders building and fencing an easy task ; the hardwood furnishes fuel ; the pine gives the settler a fair revenue ; the cedar affords employment to the industrious in getting it out for railway ties, telegraph poles, and preparing it to be cut into block for paving purposes ; and the firewood yields quite an income to the settler, who lives near enough to a steamboat landing to profitably dispose of his wood to the steamers which are constantly calling there. It will be seen that the settler who casts his lot in this part of our province has many ways of earning a livelihood. If his crops fail he may turn to the many sources of employment to keep himself ond his family, if he has one—from suffering and from hunger, and at any time, when his farm will permit, he may direct his attention to those different ways of bringing 'grist to the common mill,' and by industry and perserverance see his efforts rewarded by success, in a nice farm with good crops and the many comforts of home surrounding him. The last fall the steamer Silver Spray ran up to Manitoulin island, a married man with a family worked on the steamer for his passage to Mud bay. Here he obtained work at the saw mill, and kept his wife and family during the winter. He located on a lot, and being industrious, he improved his position day by day, until at present he is the owner of a fine farm back of Gore bay. This is only one instance—I might mention many."

THE CITY OF WOOD.

Ottawa might be appropriately called the "City of Wood." High stacks of planks cover acres of ground, barges full to the brim with lumber lie in the harbor, the very air is fragrant with the aroma of the pine, whilst above the Falls the river is crowded with floating logs, soon to become planks and laths. There is a rapid transformation of the rough round log into the smooth straight plank. At one moment a pine tree's trunk is skillfully hooked by a man who dances about in the eddying water and never tumbles in ; the next it is caught by the sharp teeth of an endless chain and drawn up into the mill, passing under the upright frame in which are fixed the saws, ten or twenty in number, according to the size of the log. Now the transformation is complete ; at the other end eager hands carry away the pine log, now perhaps in a dozen long planks. And so this goes on from May to November, and 200,000 feet of lumber are sawn into planks in one day in one mill in Ottawa.—*London Echo.*

THE MINNEAPOLIS MILLS.

A special despatch from Minneapolis, Minn., to the Chicago *Tribune*, dated Oct. 16th, says :

"A review made to-day of the season's work by the Minneapolis saw mills shows the heaviest lumber cut ever known for the corresponding time, although the total for the season will not vary much from that of 1882, as the mills will shut down earlier. The total cut of the mills at present is fully 2,000,000 feet per day, and this will be maintained until the mills shut down. The total cut for the season will be about 315,000,000 feet. The mills will shut down about November 1, which is fully two weeks earlier than usual. There will then be about 80,000,000 feet to be carried over in the boom and about 45,000,000 feet in the upper Mississippi and its tributaries, or 125,000,000 feet in all, a much larger amount than was carried over last year. The log cut in the woods next winter will not be as large as last year. Estimates made by good authorities place it from 50 to 60 per cent. of what it was last year, with 60 as an outside figure. Those firms which do their own cutting will not send in as many men as usual on account of the large amount of logs each will carry over, and it has been demonstrated that sometimes logs are not good property. This was the case with Wilson & Gillespie, who got $4.25 per thousand, or about enough to pay the cost of putting them in, they losing the stumpage. The number of 1,000,000 and 2,000,000 operators will also be largely decreased, as the disastrous results of last winter's operations have floored them financially, and as to borrow money on the prospective success of a winter's logging business is just now a work in which banks are not engaged to any remarkable extent. Still there are many firms which at such times assume that, as the others are not cutting heavily, there will probably be a scarcity, and they will therefore cut an extra amount. It is not likely, however, that the cut will exceed 200,000,000.

The drives have been unusually successful during the season. The water has been low at times, but the average has been very good. More lumber has been shipped out of Minneapolis this year than ever before, but that is not saying that the year has been most successful to the dealers. A good demand for lumber is coming from Iowa, and the majority of the shipments from this city are going there, but a number of the dealers state that they cannot send the stuff there at present prices, and accordingly they have withdrawn. Dakota, however, is receiving attention, and a good trade is being built up in that territory. A printed list is still sent out by the lumbermen, but they do not pretend to adhere to it, and there is more cutting than ever before. Discounts from 2 to 5 per cent. are made, and in some cases even more than that. Stocks are badly broken, particularly in dimension and pine lumber, and the different dealors are buying from each other as much as they ever did."

A MAINE OPERATION.

The *Milling and Industrial Journal*, of Bangor, Me., says that up in the northern wilderness of that state, near Mount Katahdin, is a wild little stream, called the Wassatiquoik, which runs through a rocky valley, surrounded by rich timbered country. The timber has heretofore been almost inaccessible on account of the difficulty of driving the stream, but now preparations are being made for a large operation in that region. F. H. Todd & Sons, of Calais, and others, own tracts of spruce and pine in township 4, range 9, and have entered into contract with Tracy & Love, of St. Stephens, N. B., for hauling and driving into boom at Oldtown, on the Penobscot, 15,000,000 feet of logs this season, and 5,000,000 to 6,000,000 each of the next successive five seasons, the whole contract involving a cut of 40,000,000 feet of pine and spruce logs. The contractors now have 80 men at work on the stream, building dams and clearing the stream for driving. About $90,000 will be expended in labor and supplies the coming winter. During the active logging season a force of 400 men and 100 horses will be employed.

The Lumber Trade.

A despatch from Ottawa dated Oct. 12, says : The lumber mills here will likely close down about the end of the month. One of the prominent lumbermen here states that for upper grade lumber the price is about the same as that of last year. The lower grades have fallen slightly, and lumbermen have been obliged to make some concessions to buyers in this respect. The trade in the Western States was very dull all summer. In some particulars it was a failure, and it is only a wonder that things have been so lively here. Lumbermen are not sending so many men to the shanties this winter, and the number of logs turned out will not be so long as during the past few years.

DURABILITY OF TIMBER AND WOODWORK.

In every department of human industry the successful man is generally one who has learned from the experience of others. In the particular matter of building there is much to be learned respecting the durability of different materials from the buildings of times gone by.

The proper seasoning of timber is one of the very best means of securing it against decay, from whatever cause it may originate. The seasoning, however, to be effectual, must be thorough and complete. In late years the modes of seasoning timber have changed. In olden times it was allowed to dry in the air a long period of time. The carpenter or builder of the present day who would feel any delight in the progress of his art cannot feel insensible to the advantage of giving durability to his materials, and yet be uninterested in any inquiry into the probable extent of their duration; for while his productions are worthy of imitation, the remembrance of them will be preserved by the engraver's art as long as there shall be men capable of paying a just tribute to the memory of departed merit. The French army in 1799, under the great Napoleon, destroyed the celebrated bridge across the Rhine, at Schaffhausen, but the fame of Grundenmann, the carpenter, will long continue; and the form of that excellent structure of the art will only cease to be remembered when carpentry itself no longer exists. We have introduced our subject in this way for the purpose of citing some of the most remarkable incidents on record in history. We have taken the pains to condense a number of the most remarkable of these, as showing our readers how long timbers have been preserved in almost perfect state. Examples are not wanting in the history of Mexico, where timbers have been found in a perfect state after being cut over 300 years. But our examples are obtained mostly from ancient history, and exist in the old world. The piles of the bridge built by the Emperor Trajan, across the Danube, is a striking instance of the durability of timber is a wet state. One of these piles was taken up and found to be petrified to the depth of three-fourths of an inch. But the rest of the wood was little different from its ordinary state, though it has been driven more than sixteen centuries.

The piles under the piers of London bridge have been driven over six hundred years, and from observations made by Dancis, 1746, it did not appear that they had materially decayed; and they are to-day sufficiently sound to support the massive superstructure. These piles are chiefly of elm.

In digging away the foundation of the old Savoy Palace, London, some 60 years ago, which was built 700 years before, the whole of the piles consisting of oak, elm, beech, and chestnut, were found in a perfect state of soundness, as also was the planking which covered the pile-heads. Some of the beech, however, after being exposed to the air a few weeks, though under cover, had a coating of fungus spread over.

On opening one of the tombs of Thebes, some 60 years ago, there was discovered two statutes of wood, a little larger than life, and in good preservation; the only decayed parts being the sockets to receive the eyes. The wood of these statues is most probably the oldest in existence that bears traces of human labor. We believe they are in the British Museum to-day.

A continued range or curb of timber was discovered in pulling down a part of Trowbridge Castle, in Kent, which was built over seven hundred years ago. This curb was built in the middle of the thickness of the wall, and was, no doubt, to prevent the settlement likely to happen in such heavy piles of buildings, and therefore is an interesting fact in the history of of constructive architecture, as well as an instance of the durability of timber.

In digging for the foundation of the present house in Ditton Park, near Windsor, the timbers of a draw bridge were discovered about ten feet below the surface of the ground; these timbers were sound, but had become black. Hakenwell says that Sir John de Molines obtained liberty to fortify the Manor House of Ditton, in 1396, and it is probable the draw bridge was built soon after that time; accordingly the timbers have been there about 400 years.

The durability of the framed timbers of buildings is also very considerable. The trusses of the old part of the roof of the Basilica of St. Paul, of Rome, was framed in 816, and they were sound and in good condition in 1814, a space of nearly one thousand years. These trusses are of fir.

The timber work of the external domes of the church of St. Marks, at Venice, is more than eight hundred years old, and is still in a good state.

The timber roof of Crosby Hall, in London, was erected over three hundred years ago, and the roof of Westminister Hall, which is supposed to be of chestnut, is now over three hundred and fifty years old.

The rich carvings in oak, which ornamented the ceiling of the king's room in Sterling Castle, are many of them still in good preservation. It is nearly three hundred and fifty years since they were executed, and they remained in their original situation until a part of the roof gave away, in 1877, when the whole was removed, and afterwards were dispersed among the collectors of curious relics of the olden times.

In some of the old mansions that yet remain, and in ancient cathedrals and churches, there is nothing like dry rot found.—*Wood and Iron.*

CARDIFF.

The *Timber Trades Journal* of Oct. 11, says: During the past seven days there have come to hand once cargo of deals from Miramichi, and one cargo of pitch pine from Pensacola. Our market has not altered in any material degree from the position we have had occasion to record recently; there is apparently not the slightest present improvement, and we can but confirm our previous remarks relative to the outlook of the timber trade. There is a steady, but not large delivery going on from stocks.

Subscribe for the CANADA LUMBERMAN.

LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on Oct. 1st, 1883 and 1884, and also the Consumption for the month of Sept. 1883 and 1884:—

	Stock, Oct. 1st. 1883.	*Stock, Oct. 1st. 1884.*	*Consumption for the month of Sept., 1883.*	*Consumption for the month of Sept., 1884.*
Quebec Square Pine	444,000 ft.	392,000 ft.	371,000 ft.	304,000 ft.
" Waney Board	455,000 "	560,000 "		
St. John Pine	10,000 "	63,000 "	2,000 "	29,000 "
Other Ports Pine	70,000 "	61,000 "	16,000 "	8,000 "
Red Pine	66,000 "	59,000 "	21,000 "	7,000 "
Pitch Pine, hewn	409,000 "	606,000 "	48,000 "	48,000 "
" Sawn	550,000 "	510,000 "	102,000 "	62,000 "
Planks	57,000 "	67,000 "	26,000 "	25,000 "
Dantzic, &c., Fir	134,000 "	67,000 "	26,000 "	8,000 "
Sweden and Norway Fir	24,000 "	109,000 "	1,000 "	8,000 "
Oak, Canadian and American	374,000 "	310,000 "	123,000 "	104,000 "
" Planks	175,000 "	179,000 "	54,000 "	67,000 "
" Baltic	21,000 "	9,000 "	0,000 "	0,000 "
Elm	37,000 "	43,000 "	31,000 "	17,000 "
Ash	27,000 "	46,000 "	26,000 "	12,000 "
Birch	71,000 "	102,000 "	69,000 "	41,000 "
East India Teak	28,000 "	71,000 "	17,000 "	6,000 "
Greenheart	105,000 "	36,000 "	12,000 "	18,000 "
N. B. & N. S. Spruce Deals	20,481 stds.	25,770 stds.	9,843 stds.	8,129 stds.
" Pine	900 "	1,082 "		
Quebec Pine & Spruce Deals	7,820 "	9,369 "	2,537 "	2,358 "
Baltic Red Deals, &c.	5,538 "	3,982 "	1,264 "	742 "
Baltic Boards	315 "	67 "	61 "	67 "
" prepared Flooring	4,007 "	3,172 "	294 "	824 "

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OFFICE OF THE INDUSTRIAL EXHIBITION ASSOCIATION,
TORONTO, MARCH 10, 1884.

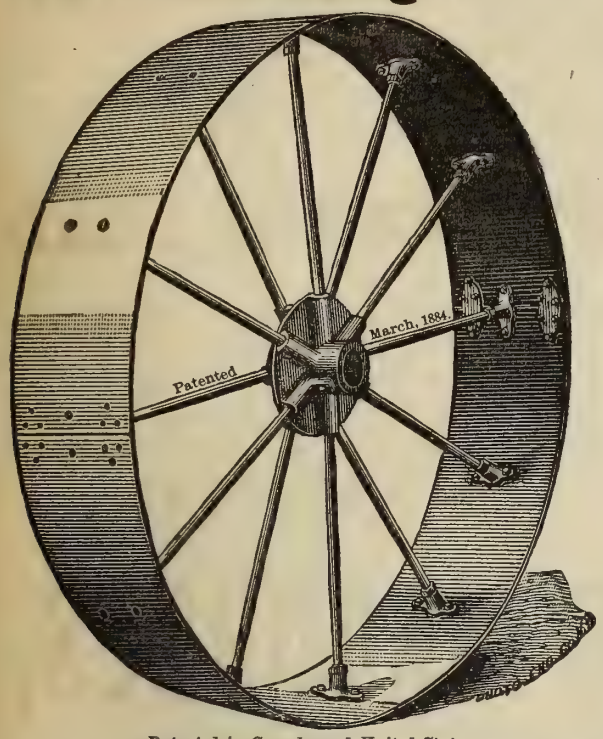
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GENTLEMEN,—In reply to your enquiry, I beg to say that the highest awards made at the Industrial Exhibition for the years 1881, 1882, and 1883, for Tents, Marquees and Flags, were to your Company, being a Silver Medal for each year. Last year, 1883, was the first in which a medal was specially offered for Camp Furniture and Equipages, and it was awarded to the National Manufacturing Co'y, of Ottawa.

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m 20 H. J. HILL, Manager and Secretary.

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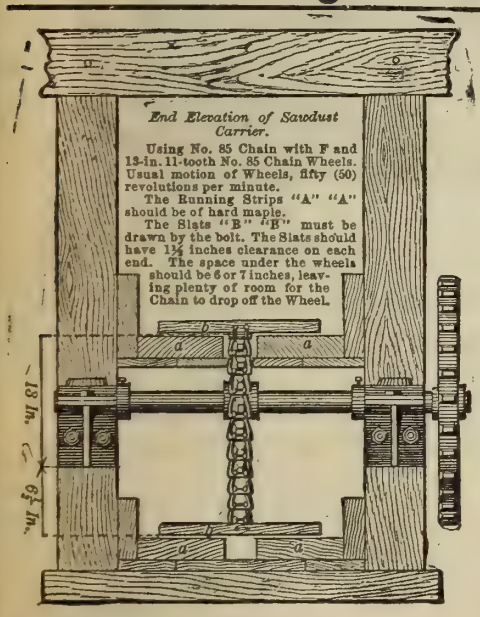
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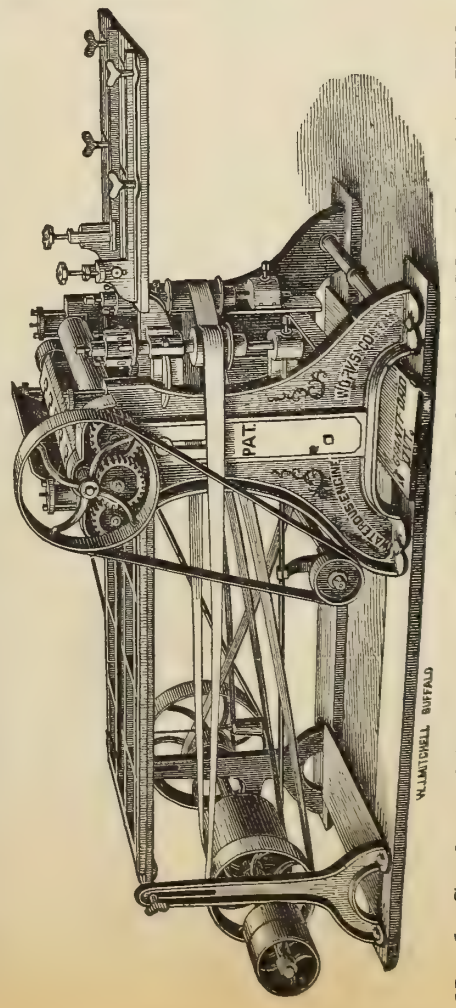
60	feet,	13	inches	wide,	8	ply.	84	feet, 26 inches wide, 8 ply.	
49	"	18	"	"	8	"	57	" 20 " " 8 "	
49	"	12	"	"	6	"	49	" 11 " " 8 "	
103	"	22	"	"	8	"	47	" 12 " " 6 "	
52	"	20	"	"	6	"	73	" 20 " " 8 "	
101	"	18	"	"	8	"	51	" 16 " " 8 "	
52	"	18	"	"	8	"	37	" 16 " " 8 "	
36	"	12	"	"	8	"			

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METALLIC SHINGLES.

We copy from the *Mail*, of the 18th Sept. a description of metallic shingles, which we understand are being largely used in Ontario, where the ordinary shingles are much cheaper than here. We therefore infer that these metallic shingles require only to be known to come into common use. We understand that a car load has been ordered from Prince Albert, and has been shipped by the manufacturer to that distant point. We would advise architects and persons intending to build to communicate with the manufacturers and obtain full information, as any roofing that combines the advantages of durability while reducing the danger from fire cannot but be matter of general interest.

The description is taken from the *Mail's* report of the exhibits at the Toronto Industrial exhibition: In this class is prominent the exhibit of metal shingles by Messrs. West, Peaching & Montrose, Simcoe. They show a small building roofed and sided with these tin and iron shingles, which are of unique design, being provided with certain corrugations to to stiffen the sheets, while they interlock with each other, forming obstacles against snow or rain driving through the joints, and at the same time presenting an exceedingly ornamental appearance. Contraction and expansion of the metals are provided for by the corrugation and methods of nailing. They are very securely fastened to the roof, having six barbed wire nails through each shingle. These iron shingles are preserved by dipping in composition of pure oil and ironclad paint, which effectually protects from rust. The matter of repainting once in six or eight years must be trifling, as iron does not absorb; one gallon is sufficient for ten or twelve squares. These shingles possess the advantage over slate of being thoroughly fire-proof, of not breaking, and of being lighter. They require no repairs, will conform readily to the shape of the roof, and must beyond doubt be the most durable in this climate. This exhibit should prove interesting to our railway companies, where many stations and buildings are so much exposed to fires from passing trains, especially as the first cost of roofing with this material is very little in excess of wood shingles. This firm is the only one in the Dominion engaged in this line of manufacture. Yet metal shingles are not an experiment, as several firms in the States have been for many years past engaged in the manufacture of a somewhat similar tile, and the rapidly increasing demand proves their merit. They are adopted by many American railway companies as a standard roof. The firm showed us several flattering testimonials from influential men in this country and the States who have their shingles in use.—*Winnipeg Times.*

JAPAN AND HMERICAN WOOL.

Speaking of the exhibit at the forestry exhibition the London *Timber Trades Journal*, among its references to the woods from different countries, has this to say:

"Among the splendid specimens of timber from Japan we may mention a magnificent slab of Retinospora obtusa, which attains to a height of 120 feet and a girth of 20 feet. The timber, which is of superior quality, and is not unlike that of the redwoods of California, is largely used for building houses and ships, and for the making of household utensils, while the bark is used as oakum and for roofing. Other six varieties of the same wood are also shown, some of a white, others of a yellowish color. Alongside may be seen the wood of another conifer, known to us only in its dwarfed habit, that of the highly ornamental Cryptomerial Japonica, which, to judge by the sections of its timber exhibited, grows also to stately proportions. The examples of the beautifully grained camphorwood, with its fragrant perfume, are very fine, and the slabs of maple, bird cherry, junipers, and yews are exceedingly pretty.

The California Redwood Company, 123, George Street, Edinburgh, show a grand specimen of Sequoi sempervirens. The section, which measures 13 feet in diameter, was cut at five feet from the ground. It is 41 feet in circumference, and the height of the tree to first branch is stated as 150 feet—total height 250 feet. The age is estimated at 2,000 years, and the entire tree, when felled, 75,000 super feet board measure, and 26,250 cubic feet, good timber. The exhibit of the company also embraces several articles of furniture made from Sequoia wood. The timber of this conifer seems to lend itself in a peculiarly excellent manner for decorative treatment. Red in color, it is of various shades some of them when polished being exceedingly rich and pleasing; while a specimen of beautiful wavy texture stamps the redwood as one of the best acquisitions to the stock of cabinet-making woods, the more especially as it is said to be durable, and not liable to shrink.

PAINTED FLOORS.

That carpeted floors are harbingers of disease is a question which, to those who have been placed in position to fully investigate, having but one side, and since some of our leading journals have called to mind long arrays of unquestionable authorities proving that carpets, however clean, and free of dust apparently, give off at every step or movement infinitesimal germs of lung irritants. The people seem to have indorsed the theory, and in many a fine house carpets have given place to Eastern rugs, which, occupying a central position, leave a fine opportunity for the painter to display his taste in decorating the intervening space between the rug and wainscoting. It will, however, place the work and imperfections of the carpenter more prominently before the people, inasmuch as the floor, being constantly exposed, must be made smoother and of better lumber than often finds its way into the floors of our houses, for when the floors were entirely covered with carpets, damp, unseasoned lumber or timber, or the same affected with dry rot, could be used and the occupants be little the wiser for the deception, but now the floors must be of good lumber and nicely fitted, else the painter, whose work supersedes that of the carpet layer, will not accept the floor as the carpenter left it, for his work, being on top, he will be held responsible for the appearance forever afterward. If this change in fashion brings about this revolution in floor-making, the change will have another argument in its favor; for others, as well as we, have seen damp, unseasoned lumber put in floors, which in turn were lain upon the joists of the same or even worse quality, then a carpet covering all, the poor inmates were compelled to breathe the moisture of seasoning lumber after it was filtered through a carpet, which would tend to render it still more unhealthy, hence we are of the opinion that the carpet is responsible for much less disease than charged with; nevertheless, we are decidedly in favor of the rug system of covering floors, for the reason that it is much more economical, it is hygienically and otherwise a very wise plan, besides the facility of often removing and thoroughly shaking the rugs, without employing an army of workmen to take up, beat and put down again. It looks as though carpets "must go."—*Lumber Trade Journal.*

WATER POWER AND STEAM POWER.

Water-power, for saw mills, flour mills and factories, says the *Monetary Times*, is no longer to the same extent the cheap and desirable motor it was formerly considered to be. Relatively to steam, the use of water pressure as a means of driving machinery, has declined within a score or two of years, in a very marked way in this country as well as in the States. The reasons for the great advance of steam power are not far to seek. Water power is not as reliable as it was before the forests were thinned out or cleared away, while, owing to the improvements in engines and boilers, steam power is now more reliable.

The relative decline in the amount of water-power utilized for business purposes, as compared with steam power, is, says the *American Machinist*, a highly suggestive phenomenon in the industrial progress of the country. "This tendency is all the more suggestive by reason of the fact that no other country in the world is as well endowed with natural water power as the United States. Manufacturing enterprises usually seek water power in a new country, because of its cheapness and availability, but when all the valuable powers have been absorbed by those who are determined to get a steady revenue from them, neither of these two features of original desirability stand forth with much allurement. As water powers are improved they become more costly to the users; as steam power is improved it becomes less costly to the users."

In 1870 the census showed that there were more water wheels in use in the United States than steam engines, and that their horse power was almost as much as the total horse power of the engines. The census for 1880 showed more steam engines than water wheels, and a total power far in excess of the latter. The change is best shown in tabulated form, thus:

	Water Wheels.	Horse Power.	Engines.	Horse Power.	Total.
1880....	55.404	1,225,379	56,483	2,185,458	3,410,837
1870....	51,018	1,130,431	40,191	1,215,711	2,346,142
Pr. ct. of inc.	8.60	8.40	40.54	79	45.38

During the four years since the census was taken, says the *Milling World*, the progress of steam power has been greater than in any other four years of American history. What a census would now show as the relative decline of water power to be, or what the next census will show it to be, can be imagined after a study of the above figures.

THE TUPELO-GUM AND WILLOW-OAK.

The Memphis, Tenn., *Appeal* says:—The tupelo-gum and the willow-oak are timbers that are destined to a commercial value never until recently dreamed of. A gentleman residing in Mississippi, who has tested them thoroughly, say the first variety is almost as soft and light as the cork of commerce, and is the whitest wood in the valley. It is extremely light, and cannot be split, and at the same time is very tough and tenacious, and will bear a very heavy strain. It will, some day soon, be used principally for buckets, bowls, pitchers and trays; also for ox-yokes, and for almost all kinds of water vessels. For bread trays it is the finest in the world. This wood grows among the cypress trees, and is far more abundant, and floats like cork. The water, or willow, oak is second only to the live oak, and is almost an evergreen; it takes the coldest weather to make it shed it leaves, and it is almost as hard, when seasoned, as the live oak, and for the rim and spokes of wheels it has no superior. For shipbuilding it will almost equal the live oak. "I have tested the crushing capacity of this wood," this Mississippian says, "and also the transverse strength, and it is one-third stronger than any white, post, red or black oak, and only 1-80th less than live oak. And yet this wood has no market value!"

HOW TO CARE FOR DOWN TIMBER

The Bangor *Courier* of late date had the following:—"The lumber in the region in Piscataquis county that was blown down in the gale one year ago will be in good condition for cutting this winter, but before another season it will be well advanced in the state of decay. Last winter different firms got out a large number of logs there. The weather was good the first part of the winter, and the amount of snow was small, thus making the condition favorable for the saving of the timber. Deep snows cover the fallen trees so that it is extremely difficult to get them out. A number of firms already have men in the woods cutting and hauling the logs short distances. Much work will be done before winter, and the logs will be hauled to the streams and rivers after the snow comes. Atwell & McLeod, of Stillwater, did an extensive business last winter in the district where the trees had been blown down by the wind, and they will probably again send large crews to those places this season."

FURNITURE WOODS.

A generation or more ago the most admired wood for furniture purposes was mahogany. Until quite recently the taste for mahogany has been held in abeyance, and black walnut has long reigned the king of the furniture woods. Before mahogany controlled the popular desire, cherry was a favorite, and our white walnut or hickory was used to a considerable extent. These old fashioned woods are coming into favor again, and very fine effects are produced by the contrasts of cherry and hickory, and by mahogany and hickory. Mahogany and cherry blend admirably as shades of color instead of contrasts. The so-called "branch" mahogany, that in veneers on the fronts of bureaus and in the frames of mirrors formerly produced such impossible effects of grain, has given place to that of plain straight grain, the effect of color rather than of grain being desired.

Except yellow and black birch and the satin and birdseye maple, there are few of our native woods that show a very distinctive grain. This makes them valuable as foils to the to the more erratic grained woods of the tropics. One of these, the *coco bolo*, of a deep red color, with broad straited grain, works up beautifully with the cherry, making a complement of tints, or with the hickory, showing a contrast of color and of grain.

According to the statement of a prominent dealer in furniture woods, our cherry and hickory are coming rapidly into demand, and for foreign woods the mahogany and comparatively little known *coco bolo* are much called for by makers of fine furniture, carvers, and internal finishers.—*Scientific American.*

THE OLD SAW MILL.

There are scenes of our youth that we love to remember,
And others, perhaps, that we long to forget;
A word, or a look, sets afire every ember,
And we find them aflame in our memories yet.
The buzz of a saw set my mind to reflection,
To-day, as I wandered, my soul to regale,
And rose like a picture the fond recollection
Of the busy old saw mill that stood in the vale.
The weather-worn saw-mill—
The musical saw-mill—
The busy old saw-mill
That stood in the vale.

It was built by a brook, far from all habitation,
That lept 'twixt the hills 'mid the silence profound;
The mill was the earnest of civilization,
As it sawed out the logs for new dwellings around.
They grew to a village, by thrift and by labor;
And the miller grew old, but still hearty and hale.
How he smiled with delight as he welcomed each neighbor
To the busy old saw-mill that stood in the vale.
When school was dismissed all the children would rally
To play on the planks that were piled on the stream;
And their shouts and glad laughter would fill all the valley,—
I can hear them to-day like sounds heard in a dream.
To the buzz of the saws it was music to listen,
As out from their jaws slid the board and the rail,
Ah, no wonder the tears on my eye-lids will glisten
As I think of the saw mill that stood in the vale.
Where? Where are they all, the familiar old faces,
That made of my childhood a season of joy?
Some are dead, all are scattered, some are filling high places,
The children that knew me when I was a boy.
And the mill, although still to my vision appearing,
Too, is gone; in a storm it blew down with the gale;
And all that remains are the memories endearing
Of the busy old saw mill that stood in the vale.
The weather-worn saw-mill—
The musical saw-mill—
The busy old saw-mill
That stood in the vale.

—*George Birdseye, in the Journal of Progress*

A Church Built With One Tree.

A redwood tree, cut in this country, furnishes all the timber for the Baptist church in Santa Rosa, one of the largest church edifices in the country. The interior of the building is finished in wood, there being no plastered walls. Sixty thousand shingles were made from the tree after enough was taken for the church. Another redwood tree, cut near Murphy's mill, in this country, about ten years ago, furnished shingles that required the constant labor two industrious men for two years before the tree was used up. The above statements are vouched for as true by Supervisor T. J. Proctor, of Santa Rosa.—*Santa Rosa (Cal.) Republican.*

Any Small Boy, With a Stick,

Can kill a tiger,—if the tiger happens to be found when only a little cub. So consumption, that deadeliest and most feared of disease, in this country, can assuredely be conquered if Dr. Pierce's Golden Medical Discovery be employed

THE PARIS BUILDING TRADE.

The building fever which has prevailed in the west end of Paris for the past few years, says *Galignani*, has ended as was to be expected, in a crisis in the building trade. Hundreds of houses have been reared in the richer quarters of the town. Many of them, completed in some cases two years ago, are still without a single occupant. Others, again, have been left unfinished. The rents demanded in these palatial residences are scarcely ever below 4,000 fcs. or 5,000 fcs. for the uppermost story, which places them beyond the reach of any but the wealthy classes. There is no demand for house-room in the quarters named above, whereas in the centre of the town and the popular districts, small tradesmen, clerks and artizans, have to crowd in wretched houses at comparative high rents, or take up their residence in the outskirts. Architects, builders and contractors alike have ignored a great law in the economy of a town of over two millions of inhabitants; supply far exceeds the demand in the west end of the town, whereas, on other points of the circumference, the reverse is the case.

THE APPLE TRADE.

Apples continue to come along in large quantities and prices are certainly no higher than last week. If anything the tendency is downward. Supplies are arriving from all sections some choice varieties coming from Nova Scotia, and there does not seem any chance for a rise this season. Choice Pippins, Hubbardstons, and other desirable kinds are selling in large lots at $1.25 to $1.50 per barrel, and dealers are indifferent about taking any variety except Gravensteins at over $1.50. This is for first-class fruit. Common and medium are offering at 75c. to $1 per barrel. Very nice apples are offering at $2 per barrel, by the single barrel. Shipments to England continue to be made on a liberal scale, the exports from Boston last week being 12,000 barrels, which make a total for the season of about 35.000 barrels against only about three hundred barrels for the same time last year. Full returns from late shipments have not yet been received, but cable advices of sales show no margin of profit. Some claim they will result in a loss. Under date of Oct. 6th, Messrs. J. C. Houghton & Co. cable that at the sales in Liverpool to-day 5,000 barrels of American apples were sold at following quotations:—Baldwins, 10s. to 14s.; Northern Spy, 10s. to 12s.; Greenings, 8s. to 11s.; Kings, 16s. to 22s. Estimating freight and other expenses at $1 per barrel, which is a low rate, the first two varieties would not net much over $1 per brl., and the greenings from 75c. to $1. Most of the shippers say the exporting business is unprofitable. Beside the freight, which is 75c. to 90c. per brl., there are numerous other small charges for insurance, commissions and shrinkage, which absorb all margins of profit, and often leaves shippers in debt.—*Boston Journal.*

A Long Bridge.

THE bridge to be built across St. Louis bay, at Duluth, by the Northern Pacific company, will be nearly one mile in length. The drawbridge will be 246 feet long, the fixed truss portion 100 feet, and the pile bridging 4,200 feet long. The contract calls for the structure to be completed January 1, 1885.

THE damage by forest fires in southern New Jersey is over $100,000. One church, several buildings, and immense cranberry bogs have been destroyed.

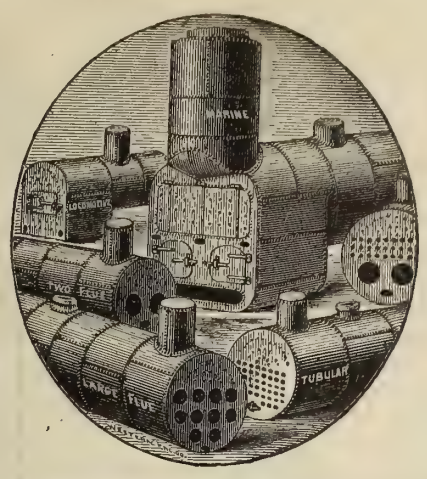
Dyspepsia, liver complaint, and kindred affections. For treatise giving successful self-treatment address WORLD'S DISPENSARY MEDICAL ASSOCIATION, Buffalo, N. Y.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain and cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup for children teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentery and diarrhœa, regulates the stomach and bowels, cures wind, colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for children teething is pleasant to the taste, and is the prescription of one of the oldest and best female nurses and physicians in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

JOHN McGREGOR & SONS

Manufacturers of all kinds of STATIONARY, MARINE and LOCOMOTIVE



BOILERS

And SHEET IRON WORK.

SECOND-HAND MACHINERY Bought, Sold or taken in exchange for new work. ☞REPAIRS PROMPTLY ATTENDED TO. All Boilers Tested by cold water pressure to 150 pounds to the square inch.

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Cooks' Favorite

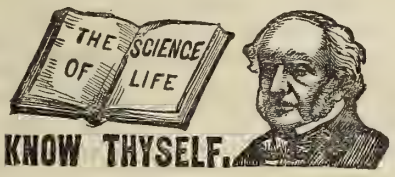
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Exhausted Vitality, Nervous and Physicial Debility, Premature Decline in Man, Errors of Youth, and the untold miseries resulting from indiscretion or excesses. A book for every man, young, middle-aged and old. It contains 125 perscriptions for all acute and chronic diseases, each one of which is invaluable. So found by the Author, whose experience for 23 years is such as Probably never before fell to the lot of any physician. 300 pages, bound n beautiful French muslin, embossed covers, full gilt, guaranteed to be a finer work in every sense—mechanical, literary and professional than any other work sold in this country for $2.50, or the money will be refunded in every instance. Price only $1.00 by mail, post-paid. Illustrative sample 6 cents. Send now. Gold medal awarded the author by the National Medical Association, to the officers of which he refers.

This book should be read by the young for instruction, and the afflicted for relief. It will benefit all. —*London Lancet.*

There is no member of society to whom this book will not be useful, whether youth, parent, guardian, instructor or clergyman.—*Argonaut.*

Address the Peabody Medical Institute, or Dr. W. H. Parker, No. 4 Bulfinch Street, Boston, Mass., who may be consulted on all diseases requiring skill and experience. Chronic and obstinate diseases that have baffled the skill of all other physicians a specialty. Such treated successfully without an instance of failure. HEAL THYSELF

GOLD for the working class. Send 10 cent for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Augusta, Maine.

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Wholesale Dealer in All Kinds of

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SHINGLES AND LATH.

CONSIGNMENTS BOUGHT AND SOLD ON COMMISSION.

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PRITCHARD & M INARD

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Metal Merchant and Manufacturer,

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White Leads, Putty, Shot. Also, Gang, Circular, and Cross-Cut Saws of all kinds. Prices furnished on application.

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Lumber and Commission Agent.

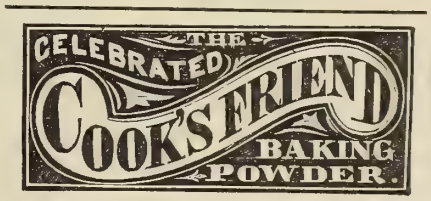
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Timber Limits and the Square Timber Trade a Specialty.

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Is the Best and Most Economical article in use for raising all kinds of Biscuit, Rolls, Pancakes, Johnny Cakes, &c. It is made from the BEST MATERIALS MONEY CAN BUY, and is perfectly pure and wholesome. Bread ready for the table can be prepared by its means in TWENTY MINUTES after wetting the flour. ☞Next to salt it is the most useful adjunct to camp supplies.

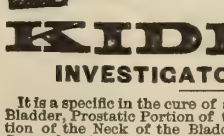
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IS THE ONLY GENUINE, BE SURE YOU PURCHASE NO OTHER. 1yL15

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English Extract of

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INVESTIGATORS IN USE.

It is a specific in the cure of all diseases of the Kidneys, Bladder, Prostatic Portion of the Urinary Organs, Irritation of the Neck of the Bladder, Burning Urine, Gleet, Gonorrhea in all its stages, Mucous Discharges, Congestion of the Kidneys, Brick-dust Deposit, Diabetes, Inflammation of the Kidneys and Bladder, Dropsy of the Kidneys, Acid Urine, Bloody Urine, Pain in the Region of the Bladder, PAIN IN THE BACK, Urinary Calculus, Renal Calculus, Renal Colic, Retention of Urine, Frequent Urination, Gravel in all its forms, Inability to retain the Water, particularly in persons advanced in life. IT IS A KIDNEY INVESTIGATOR that restores the Urine to its natural color, removes the acid and burning, and the effect of the excessive use of intoxicating drink.

PRICE, $1; or, Six Bottles for $5.

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Building & Bridge Timber Sawn to Order.

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HILLOCK & KENT

Wholesale and Retail Dealer in

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RATES REASONABLE, CENTRAL LOCATION, FREE BUS TO AND FROM ALL TRAINS.

☞Every accommodation for Commercial and LUMBERMEN.

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EPPS'S COCOA

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"By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well-selected Cocoa, Mr. Epps has provided our breakfast tables with a delicately flavored beverage which may save us many heavy doctors' bills. It is by the judicious use of such articles of diet that a constitution may be gradually built up until strong enough to resist every tendency to disease. Hundreds of subtle maladies are floating around us ready to attack wherever there is a weak point. We may escape many a fatal shaft by keeping ourselves well fortified with pure blood and a properly nourished frame."—*Civil Service Gazette.*

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JAMES EPPS & Co., Homœopathic Chemists,

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DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY THE

Peterborough Review Printing and Publishing Company (Limited), Peterborough, Ont.

Terms of Subscription:

One copy, one year, in advance	$2 00
One copy, six months, in advance	1 00

Advertising Rates:

Per line, for one year	$0 90
Per line, for six months	50
Per line, for three months	30
Per line, for first insertion	10
Per line, for each subsequent insertion to 3 mo's.	05
Cards not occupying more than 12 lines (1 inch) per annum	8 00
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Special rates will be made for page, half page and column advertisements.

Advertisements intended for insertion in any particular issue should reach the office of publication at least four clear days before the day of publication, to insure insertion

All communications, orders and remittances should be addressed and made payable to THE PETERBOROUGH REVIEW PRINTING AND PUBLISHING COMPANY (LIMITED), Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., NOV. 1, 1884.

FOREST fires have been burning in the Great Dismal swamp, destroying much timber and cordwood.

SEVERAL of the large saw mills on the Eau Claire, Wisconsin, have been shut down for the season.

AN exchange says that an order for 500,000 feet of timber has been placed at Baraga, Mich., for the Canadian Pacific railway.

L. H. DWELLY & Co., spool manufacturers at Foxcraft, Me., use 1,000,000 feet of white birch yearly in their output.

THE Pentwater, Mich., Lumber Company's saw and shingle mill were burned on October 9. Loss, $25,000; insurance $18,000.

THE Chicago *Times* says that the contracts have already been entered into for cutting 250,000,000 feet on the headwaters of the Muskegon.

THE saw mills in the New Orleans World's Exposition will occupy a space of 40,000 square feet, next the river, from whence logs can be taken for sawing.

OPERATIONS of considerable extent in getting out rock elm timber for eastern markets will be carried forward in Leelenaw county, Michigan, this winter.

THE Eau Claire Company's mill at Eau Claire, Wis., is in full operation again, and the damages to the lower dam, caused by the late floods are being repaired.

A BENT in the new mill of the Midland & North Shore Lumber Company at Parry Sound, Ont., fell, injuring one seriously and two others slightly.

FOREST fires have been raging in the swamp in Camden and Gloucester counties, N. J., and large quantities of valuable cedar timber have been destroyed.

THE dry kilns, planing mill and sheds of the Oneota Lumber Company, of Oneota, Minn., four miles from Duluth, were burned October 12, causing a loss of $23,000; insurance, $13,000.

THE Jonesboro Lumber Company, Jonesboro, Me., is building two vessels, and this winter the company will get out the timber for a three-master, that will be built next season.

NEWS has been received from Bulstrode, Arthabasca Co., Quebec, that the saw mills of Mr. Thibaudeau there have been destroyed by fire. These mills cost over $20,000, and were insured for $4,000.

THE Winnipeg Lumber Company's mill which has been purchased by J. Macauley, has been removed from its old site at Rat Portage, and is being re-elected at Blumerville, in that vicinity.

JOHN MURRAY & Co., lumbermen of Roscommon county, Mich., will soon commence their winter operations. They will cut from 8,000,000 to 12,000,000 feet of logs, banking them into Higgin's lake and tributaries.

AN English architect says that wooden houses can be built last longer than brick or stone houses, and instances the fact that in many English towns wooden houses are standing and in daily use that were built 500 years ago.

FROM New York, 6,342,000 feet of white pine were exported in September. From January 1 to October 1 of this year the amount exported was 50,006,000 feet; in 1883 for the same months, 45,796,000, and in 1882, 41,089,000 feet.

SOME of the manafacturers says an exchange will operate on their best tracts of pine the coming winter. They recognize the fact that the country is flooded with common lumber and they hope to improve matters by having a better trade to sell.

THE N. Ludington Company, of Monominee, Mich., will bank but about 18,000,000 feet of logs this season, as compared to 29,000,000 last winter. The company will deduct all the logs over from the amount cut last year, and put in enough more to make even.

THE total receipts of lumber at Tonawanda, N. Y., for five months, ended October 1, was 385,214,098 feet; shingles, 50,493,000; lath, 12,000,000. It is expected that 500,000,000 feet of lumber will have been received there by the close of the season. The average value of lumber is $2 less than it was last year.

THE lumber barges Johnson and Desota, in tow of the Germania, were waterlogged in a late gale on Lake Huron, and put into Port Huron, where they reported a loss of 80,000 feet of lumber from the Johnson's deck load, and a quantity of shingles and lath from the deck of the Desota.

NEGLECT of the attendant of the Fond du Lac boom, near Duluth, after the passage of a tug, caused a partial loss of 1,000,000 feet of logs. The logs were hung up above the Dalles, in the St. Louis, and a rise carried them down through the open boom, scattering them in all directions, and some of them out into the lake.

S. & J. ARMSTRONG have started two lumber camps near McKellar, Ont., in the Georgian bay district, and will get out over 4,000,000 feet logs for the Georgian Bay Lumber Company. They are also cutting white oak plank and timber for the Midland & North Shore Lumber Company, to be used in the latter's new mill at Parry Harbor.

CURIOUS freaks of nature are very common, in every department, but one rarely hears of anything equalling that of a pine tree in Irwin county, Ga., that has to distinct bodies, but only one top. The trunks grew out of the ground about five feet from each other, but at forty feet, grew into each other, forming one tree with one top.

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, Oct. 14, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., Washington, D. C.:—

306,424.—Floor clamp—H. A. Pichard, Danvers, Mass.

306,525.—Lathe, turning.—G. S. Roberts, Meredith, N. H.

306,399.—Log loader—W. E. Hill, & M. J. Lyons, Kalamazoo and Saginaw, Mich.

306,433.—Log turner—D. J. Sattsman, Brewton, Ala.

306,333.—Lumber trimming machine—T. J. Frazier, Lyons, Iowa.

306,404.—Mortising machine—J. J. Keans, Pittsville, Wis.

306,507.—Plane—C. W. Meekins, Pine Meadow, Conn.

306,693.—Plane, moulding—J. R. Lawrence, Durham, N. C.

306,622.—Sawing machine, circular—G. R. Johnson, St. Marys, Ohio.

306,643.—Veneer cutting machine—N. E. Ranger, Weld, Me.

PATENTS ISSUED OCT. 21.

306,888.—Bench for jointing lumber—C. A. Williams, Webster City, Iowa.

307,074.—Bit auger, tool for cutting the floor lip and cutting spur of—J. Swan, Seymour, Conn.

306,939.—Dust from shavings, apparatus for separating—J. B. Mahaffey, Baltimore, Md.

306,723.—Lathe for turning wheels—J. Du Bois, Du Bois, Pa.

307,065.—Mortising machine—J. Oppenheimer, Shenandeah, Iowa.

306,763.—Plane—S. G. Laskey, Chelsea, Mass.

306,877.—Plane, bench—J. A. Traut, New Britain, Conn.

306,826.—Saw mill, band—D. B. Hanson, assignor to Sinker, Davis & Co., Indianapolis, Ind.

306,811.—Saw mill set-works—J. Cook, assignor to Sinker, Davis & Co., Indianapolis, Ind.

306,967.—Saw tooth, insertible—G. F. Simonds, Fitchburg, Mass.

307,018.—Sawing machine—J. H. Coppock, Deer Creek, Ind.

306,949.—Sawing machine, circular—R. G. Peters, Manistee, Mich.

307,038.—Stump extractor—L. B. Gibson, South Addison, N. Y.

306,916.—Stump-puller—D. L. Grossman, Rutland, Ind.

306,850.—Trees, device for felling—P. Miller, Norwich, Conn.

THE INVENTOR'S OPPORTUNITY.

It is about time that some ingenious inventor contrived something that shall prevent the fearful mortality and bodily injury resulting from the running of edgers in saw mills. Now that the mill machinery of the country has been brought to such capacity and perfection that, when it is all running at high speed, and on full time, the lumber market is soon glutted, it would be well for the experts to contrive a few few safety devices. Though it is an unpleasant thing to do, we must say that the logging and sawing industry kills by far too many men, and mangles more than it kills. The proprietors and machinery manufacturers have a responsibility in this matter, and should awaken to it. In a majority of instances in which we have to record a mill or logging casualty, it is stated in the local report or daily paper despatch that the man killed or injured had a wife and one or more children. The woe that is caused by these casualities is fearful to contemplate. A bad feature of them is that the deaths resulting and injuries inflicted are of the most horrible description. It does seem as though three-fourths of them could be averted by protective appliances.—*Northwestern Lumberman.*

"The play's the thing,
Wherein I'll reach the conscience of the King.'
And equally true is it that Dr. Pierce's Pleasant Purgative Pellets (the original Little Liver Pills) are the most effectual means that can be used to reach the seat of disease, cleansing the bowels and system, and assisting nature in her recuperative work. By druggists.

BOARD OF TRADE RETURNS.

The following are the returns issued by the Board of Trade, for the month of Sept., 1884, and first nine months of the year:

MONTH ENDED 30TH SEPT. 1884.

	Quantity.	Value.
Timber (Hewn).	*Loads.*	*£.*
Russia	31,118	52,971
Sweden and Norway	59,858	91,409
Germany	19,501	47,484
United States	8,116	32,929
British India	5,636	86,677
British North America	31,271	142,981
Other Countries	34,169	36,654
Total	189,669	491,105
Timber (Sawn or Split, Planed or Dressed).		
Russia	204,503	467,145
Sweden and Norway	167,445	349,490
British North America	139,758	328,495
Other Countries	18,199	53,049
Total	529,900	1,198,179
Staves, (all sizes)	15,977	53,012
Mahogany (tons)	5,849	51,098
Total of Hewn and Sawn	719,569	1,689,284

NINE MONTHS ENDED 30TH SEPT, 1884.

Timber (Hewn).		
Russia	190,965	356,646
Sweden and Norway	488,225	730,172
Germany	222,080	538,441
United States	147,609	542,272
British India	31,798	464,169
British North America	172,126	758,341
Other Countnes	318,613	431,327
Total	1,571,416	3,821,368
Timber (Sawn or Split, Planed or Dressed).		
Russia	843,094	1,803,171
Sweden and Norway	1,247,192	2,655,916
British North America	729,733	1,721,602
Other Countries	322,791	988,846
Total	3,142,810	7,169,535
Staves (all sizes)	104,544	399,139
Mahogany (tons)	46,859	427,949
Total of Hewn and Sawn	4,714,226	10,990,903

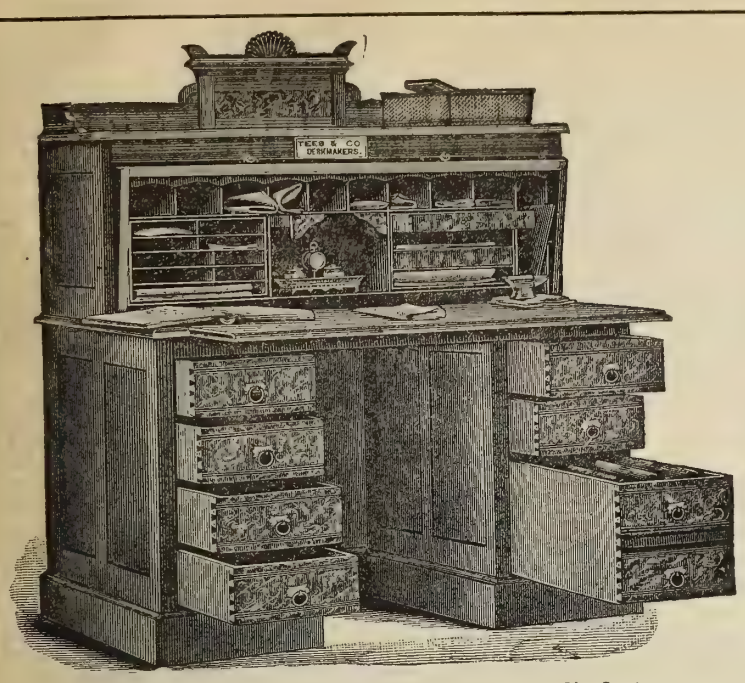
GLASGOW.

The *Timber Trades Journal* of Oct. 11th, says:—A considerable amount of business has been done at the auction sales held during the past week, one at Greenock on 3rd inst. and the other at Yorkhill wharf here on the 8th inst. At the latter the goods offered comprised a large parcel of Michigan 1st pine deals, besides Quebec and Lower Port deals, Namsos battens, birch and whitewood timber, ash boards, &c., making altogether an attractive catalogue. There was a large company gathered, and sales made were principally of Michigan deals and St. John birch timber.

On 3rd inst., at Greenock, Messrs. Edmiston & Mitchell, brokers, sold by auction:

Quebec waney boardwood—		
46 c. ft. avg. per log	1s. 8d.	per c. ft.
Do. yellow pine (deck plank)—		
30 c. ft. avg. per log	2s.	"
Do. yellow pine (sup. B. qlty.)—		
55 c. ft. avg. per log	1s. 6½d.	"
Do. yellow pine (ordinary)—		
60 c. ft. avg. per log	1s. 1½d.	"
Do. red pine (first-class)—		
30 c. ft. avg. per log	1s. 0½d.	"
Hewn pitch pine—		
32 & 45 c. ft. avg. per log	1s. 1d.	"
Pitch pine planks—		
3 & 4 in.	11d. & 11½d.	"
9 logs Quebec ash (515 c. ft.)	1s. 10d.	"
3 " hickory (152 ")	1s. 10d.	"
1 log birch (59 ")	1s. 6d.	"
1 " oak (38 ")	2s. 9d.	"
Quebec 3rd bright pine deals—		
12 ft. 11×3	11¾d.	"
11 " 11×3	11¼d.	"
12 " 9/11×3	11¾d.	"
12 " 7/8×3	9½d.	"
9 to 14 " 7/17×3	11½d.	"
Do. 3rd bright pine ends—		
6 to 8 ft. 7/14×3	8¾d.	"
Do. red pine deals—		
9 to 17 ft. 6/15×3	10½d.	"
Do. 4th spruce deals—		
12 ft. 9×3	9½d.	"
12 " 7/9×3	8¾d.	"
Do. 4th spruce ends—		
6 ft. 7/9×3	7½d.	"
The following without reserve:		
Quebec waney boardwood—		
42½ c. ft. avg. per log	1s. & 1s. 1d.	"

Many imitators, but no equal, has Dr. Sage's Catarrh Remedy.



INSURANCE DESK (Open End Cylinder).
BLACK WALNUT.

170 STYLES —OF— DESKS.



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BLACK WALNUT OR ASH.

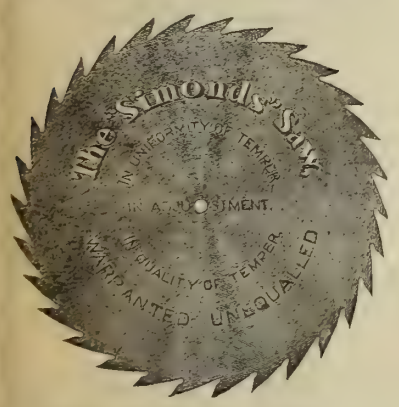
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The Northwest.

Our attention has been called in various ways to the forest wealth of the Canadian Northwest, and recently we published some account of it given by the Calgary *Herald*. Its extent is not yet fully known. Mr. W. C. Van Horne, General Manager of the Canadian Pacific Railyaw Company, has lately been over the mountain section of the line, and thus remarks about the country it traverses:—"In addition to the agricultural possibilities of the many valleys of British Columbia, and its great mineral wealth, its magnificent forests alone will furnish a large and remunerative traffic for the railway."

A Fatal Accident at Kincardine.

KINCARDINE, Oct. 27.—John McLeod, a young man, lost his life this morning. While attending to his duties in the engine room of Rightmy' salt works he came in contact with the driving wheel and was instantly killed.

How to Save Money,

And we might also say time and pain as well, in our advice to good house-keepers and ladies generally. The great necessity existing always to have a perfectly safe remedy convenient for the relief and prompt cure for the ailments peculiar to woman—functional irregularity, constant pains and all the symptions attendant upon uterine disorders—induces us to recommend strongly and unqualifiedly Dr. Pierce's Favorite Prescription—woman's best friend. It will save money.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainity, write for particulars to H. HALLETT & Co., Portland, Maine. 6md145-1yw

A PRIZE Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All, of either sex, from first hour. The broad road to fortune opens before the workers, absolutely sure. Address TRUE & Co., Augusta, Maine

MICHIGAN FORESTS.

The American Forestry Congress which met in Saratoga considered various questions relating to trees, tree planting, and tree preservation, which will be of interest. Mr. Perry Hannah said, in the course of an interview published recently in the *Post*, that the pine forests of the state would last about ten or 15 years more; that is, before the year 1900 the great lumber industry of Michigan would have died out for want of material. There seems to be no way to prevent this result. The owners of the pine lands bought them for the special purpose of converting their growth of pine into logs, lumber and cash. It seems like a work of devastation, but, whether the rapid clearing will in the long run appear to be the most profitable move in a business view or not, it is progressing too rapidly, and the plants for logging, sawing and transportation are too extensive and too well established to admit of any doubt that the manufacture will go on till there is not a merchantable pine tree left standing in the lower peninsula.

The same fate is in store for the hardwood umber trees, of which there is such a splendid growth in the northerly part of the state—ash, maple, birch and others. Within the past ten years, and chiefly within the last five, steam and water mills have sprung up for the manufacture of these woods into lumber for house-finishing, furniture and cabinet work, and they are increasing at a rate that promises to exhaust the supply during the lifetime of some who are now engaged in the business. The sugar-maple is especially in demand, and factories for making the birdseye veneering are to be found in many of the maple localities. Denuded pine lands in other states have become barrens. There are great tracts in the State which the owners do not reckon worth paying taxes on, now that they are stripped of their trees.—*Lumber World.*

BLACK BIRCH.

Black birch is a close-grained, handsome wood, and can be easily stained to resemble walnut exactly. It is just as easy to work, and is suitable for nearly, if not all, the purposes to which walnut is at present applied. Birch is much the same color as cherry, but the latter wood is now scarce, and consequently dear. It is with difficulty that cherry wood can be obtained at $50 a thousand feet, while birch wood can be purchased at any saw-mill for $10 per thousand feet. When properly stained it is almost impossible to distinguish the difference between it and walnut, as it is susceptible of a beautiful polish, equal to any wood now used in the manufacture of furniture. In the forests throughout Ontario birch grows in abundance, especially if the land be not boggy. There is a great difference in the wood of different sections. Where the land is high and dry the wood is firm and clear, but if the land is low and wet, the wood has a tendency to be soft and of a bluish color. In all the northern regions it can be found in great abundance, and as the tree grows to such a size, little trouble is experienced in procuring a large quantity. The forests of Manitoulin Islands abound with it, as well as those of Peterborough and Haliburton districts. The Muskoka district also contains a plentiful supply. During the past few years large quantiti of this wood have been exported from the Province of Quebec at a low figure. It is very easily detected among other trees by its height, large trunk, and the peculiar color of its coarse bark. Most of the perforated chair bottoms now in use are manufactured from it There is a species of bird's-eye birch, but it is very scarce. An evidence of the weight and solidity of the wood is the fact that it will sink after being a few days on the water.—*Toronto Globe.*

LUMBER PROSPECTS.

"It is useless to expect a revival in the logging business this season," observed a veteran lumberman to the reporter, yesterday, "the outlook is not so good as it was last fall, logs are lower, men harder to get, supplies about the same, and there is about the usual supply of deals on the other side. In former years we were all well into the season's work by the middle of October, but at the present time only a few of the leading operators are making any move. Nearly everybody lost money last season and few contracts have been let so far. Logs were sold at less than they cost last spring, and having been bitten once most of the prominent dealers will hold back to the last minute before putting in men and supplies.

"Of course, operations are becoming more and more difficult every year, and at the present outlook the lumber business in this Province is doomed to a rapid decline. The trees are remote from the water, and have to hauled miles to the brow in many cases, and as the camps are moved further into the heart of the country, the portaging of provisions foots up a serious item. Last year the weather was favorable, yet it was after May 1st when the last of the logs reached the brows.

"Mr. Gibson's men are at work on the Nashwaak, and the understanding is that the output on that river will not exceed 25,000,000 feet of logs. There is some stir on the Miramichi river, and a few of the old-timers have opened up the upper St. John, but, on the whole, the prospect is so blue that the spruce cut will be very limited this season. Probably not more than 50 per cent., or less than 200,000,000 feet will be cut in New Brunswick this year."—*St. John Telegram.*

PURCHASE NOW.

The *Northwestern Lumberman* says:—Those who contemplate engaging in the business of manufacturing lumber, and have their pine to buy, would do well to consider the wisdom of buying it before there comes another boom in prices. During the last two years it has been shown in numerous cases that the manufacturer cannot pay such prices for stumpage as ruled in 1881-82, and succeed in business. Their ships sail well so long as high prices are obtained for lumber, but when depression comes the wind leaves their canvass and disaster follows. Stumpage is now 25 per cent. lower than it was in the years above named, and in many individual cases 25 per cent. would not begin to cover the decrease in prices. The best business men sell when prices are highest and buy when they are lowest, so far as they can determine when those points are reached. That stumpage will advance as soon as better conditions govern the lumber market is inevitable, and we know of several operators that sold pine two and three years ago who think it is about time to begin to buy it in again. There are men who will make respectable fortunes by these transactions.

TIES TO ONE HUNDRED FEET.

There was addressed to the *Register* this week the query: "How many ties are laid to 100 feet of track, and, also, how many to the mile?" The number of cross-ties in a mile of track varies largely in different roads. Every first-class line has at least 2,640, or one every two feet, and some exceed 3,200 per mile. Then again, there is a difference on different parts of the same road. A tie, to grade, must present a clear surface of eight inches and a thickness of six inches. Sometimes ties below grade are used and the difference balanced by increased numbers. To illustrate the existing difference take the following examples from St. Louis roads: The Cairo Short Line uses 2,640 cross-ties per mile, as does also the Missouri Pacific on all new road; The Wabash, from 2,700 to 3,000; with the St. Louis and Cairo, 3,000 is the standard. The Vandalia Line uses 3,200 cross-ties per mile, and this also the average on the Frisco Line, although there are as high as 3,280 on some portions of the Arkansas division of the latter road. Of the railways entering this city perhaps 2,900 cross-ties per mile would be a fair average.—*Railway Register.*

SHAFS AND BELTS.

In many cases the shafting is too light for the weight put upon it and the strain to which it is subjected. In many cases the bearings are too far apart to properly sustain the load when in motion. In many cases the directions of the belts are either absolutely improper or relatively wrong.

Recently much trouble was caused by the heating and rapid wearing out of the boxes on the reciving length of a main countershaft in an establishment which occupied a four story building. The length of shaft, which was only two inches in diameter, was replaced by one of two inches and three-eighths, but the trouble still continued. Between two hangers, a little over eight feet apart, were hung pulleys, the aggregate weight of which could not have been less than six hundred pounds. The main driving belt, twelve inches wide on a six foot pulley, ran directly up and down—vertically—and every other belt pulled in one direction. The main belt that run vertically weighed about two hundred pounds. With these data the intelligent millwright or other mechanic can readily see that economical running was impossible.

Objection is made to shafting, stiff enough to bear the load and strain, on account of its weight. This might be remedied in a great measure by substituting hollow for solid shafting. This subject was treated definitely in the *Scientific American* of May 12, 1883, under the heading "The Load of Shafting," showing that the change was entirely feasible.

Part of this objection might have been removed, also, by sufficiently supporting the shaft, as it is evident that a shaft will run with less friction when running perfectly straight and level than when running on the "double wabble" principle; at least no deflection out of a direct line should be permitted on a shaft at any place in its entire length. Even if a deflection is not apparent to the eye, it can be detected by holding the finger against a shaft in motion.

The direction of belts is a subject that is not usually sufficiently considered. If a belt is hung to run vertically its entire weight is upon the upper shaft, and it must be kept so tight as to take up the sag of its weight, which causes it to fall off from the bottom of the lower pulley. If a belt must run vertically, let the lower pulley be as much larger than the upper one as possible, so that the belt can have a bearing on its sides. Under no circumstance allow the lower pulley to be smaller than the upper one; it is best always in leading from a lower to an upper shaft, or vice versa, to give the belt an angle; the best running belts are those which run horizontally.

Never have the pull of the belts all on one side of the shaft; it is unnecessary to point out the reasons why. The pull of belts should be as equally distributed relatively as possible.

It is an easy matter to ascertain the proper position of the bearings of a shaft relative to its weight before the hangers are placed and the shaft hung. Place the bare shaft on boxes on movable horses, the bearings being at the desired distance apart. Then load the length of shaft with the weight or estimated load of pulleys, and notice any deflection. The load test need not be the actual weight, but only a relative portion. Rig a lever over the shaft midway between the bearings on the horses, one end of the lever to be held by a rod bolted to the floor and the other end loaded. By estimating the difference (relative) between the fulcrum and the shaft and the shaft and the weight at the end of the lever, a comparatively easily handled weight can represent the total weight of the shaft, on the principle of the ordinary steam boiler safty valve lever. After testing the shaft by the actual weight of the pulleys and belts it has to carry, add 50 per cent. more for the sagging, swaying, and vibration of the belts in motion, and when this total weight can be sustained without deflection, the position of your bearings is determined.—*Scientific American.*

Shipments from St. John.

According to the St. John *Globe* the shipments of deals from that place to trans-Atlantic ports during the past nine months show some reduction as compared with the shipments last year. From January 1st to September 30th last year 153,535,517 feet of deals were sent forward, while this year 145,957,817 feet were exported. There has been an increase in the shipments of birch timber, which this year amounted to 11,546 tons compared with 7,401 tons last year. Of pine timber 3,642 tons went forward this year and 7,401 tons last year. The two largest shippers this year are Alex, Gibson with 90,789,825 superficial feet of deals, and W. M. Mackay, 22,337,201 S. feet. Then follow in order Guy, Bevan & Co., Samuel Schofield, and R. & J, Stewart.

A TOUR THROUGH THE WOODS.

Some weeks ago we noticed the departure of Mr. Phippe, the Ontario forest conservator, on a tour of examination in the lumbering woodlands near the Upper Ottawa. He has now returned and is staying for a day or two at the Grand Union. During his journey he visited the establishments of Messrs. Booth, Thomas Mackey, Levi Young, William Mackay, Bronson and others, stopping some days with each, travelling through their limits, remaining over night at their camps in the bush, and observing thoroughly the manner of their operations and the management of the forest. Mr. Phipps describes himself as having been treated with the greatest hospitality at all these establishments, and given every facility for observation and enquiry. He is of opinion that, with regard to a very large portion of the country, settlement by farmers should be discouraged, and every effort made to retain a permanent and productive forest. This, he observes, is being done in many countries of Europe, where land is much more valuable than here, and where the opportunities of attaining the object are not nearly so great. There they have to plant a forest—here, we need only protect one. It is to be noticed, he remarks, that houses and furniture, and many another product of the forest, are almost as necessary to the comfort of man as food itself, and that we need land to grow the one as well as the other. Everywhere on his journey the ravages of fire, both of this summer and of earlier date, were visible in the timber lands, and the general opinion of practical men was found to be that Ontario loses millions of dollars annually by this cause. With the assistance of such men, Mr. Phipps has matured a plan, which he will shortly submit to the Ontario Government, by which these great losses may be largely diminished. It is to be hoped that it will soon be in successful operation.—*Ottawa Free Press.*

FAMINE CAUSED BY GOATS.

According to the *Indian Forester* famines in India are caused by goats. The goats in India appear, as a rule, to live on the brink of starvation, as, indeed, goats almost everywhere seem to do, collecting a scanty livelihood out of the barrenest materials. Especially, however, do they attack the green shoots and topmost twigs of every young tree which they come across. A herd of goats, numbering, say, from 15,000 to 20,000 animals, as is sometimes the case in the desert tracts of Asia, is not likely to leave much vitality in the saplings that grow in its line of grazing. These saplings, therefore, never grow to trees. The old trees, unless reinforced from time to time by a yonger growth, die off, and thus whole forests disappear. Without forests the rainfall ceases; without rain the crops fail. In spite of the enormous extent of Indian plains, it is altogether possible that the action of the goats must be thus indirectly responsible for Indian droughts. St. Helena, as every one knows, has been converted from a Garden of Eden to a howling wilderness owing to the importation of the goat alone. In Cyprus, too, the diminished rainfall and consequent sterility is attributed almost entirely to the herds of goats which every Cpyriote appears to keep, and which have long ago devastated the vegetation of the island.

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c, measured and culled to date:—

	1882.	1883.	1884.
Waney White Pine..	2,473,010	3,027.539	2,135,267
White Pine.....	7,438,595	6,292,583	3,686,504
Red Pine.....	1,419,054	443,974	309,940
Oak.....	1,149,396	1,716,636	706,633
Elm.....	701,026	309,261	651,722
Ash	263,196	256,004	410,206
Basswood	1,273	2,244	4,121
Butternut.....	2,639	1,028	1,260
Tamarac.....	51,482	5,283	19,113
Birch & Maple.....	268,333	138,803	201,141
Masts & Bowsprits...	33pcs	—pcs	—pcs
Spars.....	51 pcs	— pcs	41 pcs
Std. Staves.....	352,6.2.13	627.0.1.22	66.9.2.20
W. I. Staves.....1134.8.0.6		510,2.3.5	176,3.2.19
Brl. Staves.....	75.4.2.29	87,2.1.19	2.4.2.29

JAMES PATTON,
Supervisor of Cullers.

Quebec, Oct. 10.

Chips.

AT the Forestry Exhibition at Edinburgh, out of 290 awards for Great Britain, Scotland got 231.

J. H. WALLER, a Canadian, will operate in square timber, elm and pine, in Grand Traverse county, Mich., the coming winter.

IT is estimated that 6,000,000 feet of English deals have this year been shipped from ports on Lake Superior and Michigan.

CAPT. JOHN M. WILSON, a pioneer lumberman of the Lake Umbagog region, died at Old Orchard, Me., recently, where he had long resided.

WHITNEY & REMICK, Saginaw manufacturers, on account of carrying over such a large stock of logs and lumber, will log but about 5,000,000 feet the coming winter.

GINSENG root is a forest product that is dug by Indians and marketed to considerable extent at Ludington, Mich., where it brings 30 cents a pound. A single Indian has sold as much as $60 worth at one jog.

ONE train of 18 cars is daily required to transport the lumber manufactured at Stillwater, to Bangor, Me., where it is transhipped to vessels. There are three mills at Stillwater, owned by John Morrison & Co., A. B. Sutton and Geo Lewis.

MCARTHUR BROS., an Ontario firm, says the *Northwestern Lumberman*, have this year shipped from Lake Huron and Lake Michigan ports to Canada, 3,000,000 feet of what is called in the provinces "board pine" or pine in the log, slabs off, for re-sawing. It sells in Quebec for 35 and 36 cents per cubic foot, and is shipped to England.

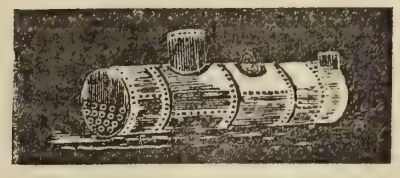
IT has recently been stated that the Canadian Pacific Railroad Company has this year purchased of Duluth lumbermen 7,500,000 feet of square timber, to be used on the line of Port Arthur, Ont. Previous to that it had been stated that 3,000,000 had been purchased for such purpose, which was too small by more than one-half.

THE wood industry is a most important branch of Austrian trade, particularly the manufacture of furniture at Vienna, where two companies alone have seven manufacturies, as well as branches in Moravia, Silesia, and North Hungary, employing altogether some 8,000 persons. Wood carving is largely carried on in the homes of the operative carvers, and this is especially the case in the mountain districts.

PLANER KNIVES, Stave Cutter' Stave Jointing, Shingle do, Cheese Box, Veneer Cutting, Paper Cutting, Leather Splitting, Moulding and Tenoning Knives.

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One 50 Horse-power Engine.
One Pr. 35 " "
(COUPLED)
One 16 " "
One 10 " "
One 4 " "
Boilers, 4 to 25 Horse-power.
Steam Pumps, Drills, &c.
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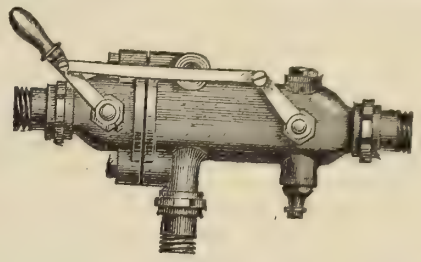
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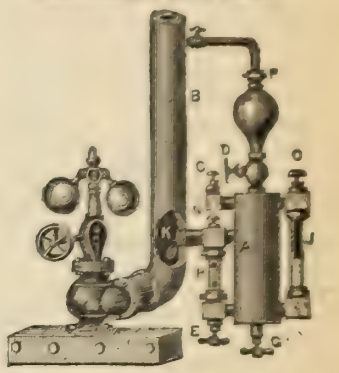
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The Continuous Feed Lubricate Saves 50 per Cent in Oil.



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SAW MILL DOGS

The Sawyer's Favorite

For Holding Logs upon a Saw Mill Carriage while being Sawn into Lumber.

MISSISSIPPI, June 7th, 1883.

HUGH GIBSON, ESQ.,—Your Patent Excelsior Mill Dogs give entire satisfaction, and is certainly up to your recommendation. They are the best Mill Dog in the market. I am very much pleased with them.

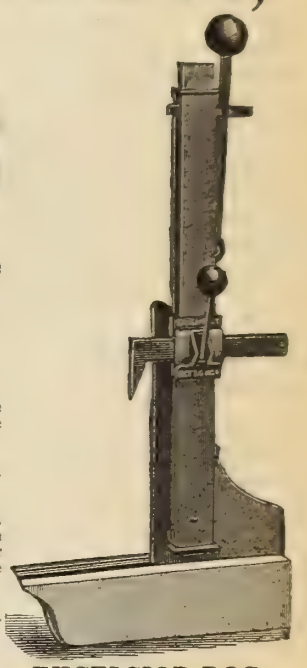
Yours Respectfully,
PETER McLAREN.

BERKLEY, April 20th, 1883.

HUGH GIBSON,—SIR,—The Dogs I bought of you give satisfaction. They beat any Dog that I ever saw for ripping or edging lumber on carriages. They are just the thing for scantling. I would not take $50 for them to-day and have to wait for another pair to come from you, because I believe they make two dollars a day for me.

Yours truly,
GEO. S. BROWN, JR.

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EXCELSIOR DOG.

Manufactured by HUGH GIBSON, CHATHAM.

PETER ROBERTSON

CHAUDIERE, - OTTAWA,

MANUFACTURER OF

LUMBERMANS' TOOLS!

Which took every honor awarded at the Centennial Exhibition.

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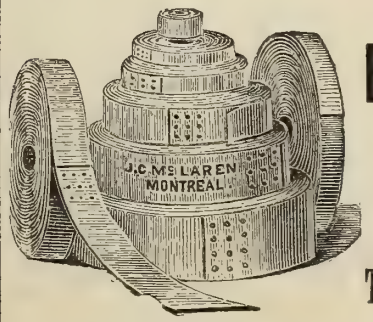
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PETER ROBERTSON, Chaudiere, Ottawa.

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Market Reports.

TORONTO.

From Our Own Correspondent.

OCT. 25.—Navigation is drawing to a close, and it is possible that four or five million feet more lumber may yet get away from this port, if the weather proves favorable, but certainly not more than that amount. During the last two weeks thirteen vessels have left our docks taking with them 2,100,000 feet, a small portion of which consisted of basswood, and the balance pine, a considerable portion of the latter of fair quality. Freights are now up to $1.25 per M. to Oswego, and will likely advance during the course of a few days to $1.50 per M. Sales from the yards are fair and bill stuff held stiffer. Many of the mills are now closed down for the season, and but small quantities of scantling and joisting left in stock at any of the mill yards, although, no doubt, enough on hand to meet the demand of a winter's trade. Hemlock is now being used more largely than at any former period, prices for which rule fully $2.00 per M. less than pine, and the question of dollars and cents tends to largely increase its use, and it is rumoured that a retail yard is likely to be opened out shortly devoted entirely to the hemlock trade.

In my last letter I gave the difference in favor on through shipments from Midland to Parkdale as being $2.50 per car, as against cars purchased here and ordered forward to the same point. I should have said $5.00 per car, as I find there is a further charge made by the Canadian Pacific Railway Co. for the use of their sidings in unloading, which charge, if made on through consignments, is borne by the Grand Trunk Railway Co. This extra charge represents one-fourth of the entire freight charges on a car from Midland to this city, so that you will easily see the serious discrimination made against this city as a lumber market for its western confines. How long such a state of things will be borne by our people remains to be seen.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
Scantling and joist, up to 16 ft	13 50
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 00
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	20 00
" " " 32 ft	21 00
" " " 34 ft	22 50@22 50
" " " 36 ft	24 00
" " " 38 ft	27 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	24 00
" boards "	20 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 00
Three uppers, Am. inspection	35 00@40 00

B. M.

1½-inch flooring, dressed	30 00
1½ " " rough	16 00
1½ " " dressed	25 00
1½ " " undressed	15 00@15 00
1 " " dressed	22 00
1 " " undressed	16 00
⅜ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	2 90
Sawn Lath	2 75

WINNIPEG.

The *Commercial* of Oct. 21, says :—There has been no change worthy of note in this trade during the week. Sales have been a little below those of the previous week, and seem to get less each week as the season nears a close. A standard list of prices is still out of the question, and dealers quote to suit the customer and their own anxiety to sell. Ready cash can bring out some wonderfully low quotations where a heavy contract is to fill.

MONTREAL.

From Our Own Correspondent.

OCT. 25.—So far as wholesale business goes this market remains much in the same inanimate state which has characterized it for some months past, and has a weakening tendency. The retail trade for hardwood has been fair, and good dry stock maintains its value. The demand at the mills is reported good, but prices of cargo lots are lower than at the corresponding date of 1883. There have been large arrivals of laths and prices are now lower with a still downward tendency. Other prices are unchanged. We quote ex yard as follows :

Pine, 1st quality, ℔ M	$35 00@40 00
P ne, 2nd " ℔ M	22 00@24 00
Pine, shipping culls, ℔ M	14 00@16 00
Pine, 4th quality deals, ℔ M	10 00@12 00
Pine, mill culls, ℔ M	7 00@ 9 00
Spruce, ℔ M	10 00@13 00
Hemlock, ℔ M	9 00@10 00
Ash, run of log culls out, ℔ M	15 00@18 00
Bass, " " ℔ M	15 00@20 00
Oak, ℔ M	40 00@50 00
Walnut ℔ M	60 00 100 00
Cherry, ℔ M	60 00@80 00
Butternut, ℔ M	25 00@35 00
Birch, ℔ M	20 00@25 00
Hard Maple, ℔ M	25 00@30 00
Lath, ℔ M	1 60@ 0 00
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 50@ 0 00

SHIPPING.

Nothing doing in the way of freights for the River Platte. Rates for deals to Liverpool are very firm at 50s., but the amount of shipments as noted below are now falling off considerably : Bk Annie Harkness for Montevideo, 1,003,785 feet white pine lumber; SS Toronto for Liverpool, 11,644 deals; SS Tetania for Glasgow, 5,455 deals ; SS Droutholm for London, 18,524 deals, 9,400 boards and 980 deal ends; SS Glocester for Britol, 18 logs and 1,563 deals; Bk Republic for Buenos Ayres, 655,141 feet white pine lumber; SS Saltburn for London, 5,474 deals; SS Oregon for Liverpool, 10,517 deals; Bk George for Buenos Ayres, 784,757 ft. white pine lumber; SS Cynthia for Glasgow, 4,207 deals; SS Milanese for Liverpool, 2,733 deals and 10,000 ft. boards; SS Austrain for Liverpool, 1,165 deals; Bk Petitcodiac for Buenos Ayres, 571,002 feet white pine lumber; Bk Owen for Buenos Ayres, 505,756 feet white pine lumber.

CORDWOOD.

Prices are well maintained and stocks are ample, but the demand this year has fallen off considerably as compared with 1883. We quote at the wharves ex cartage as follows :

SHIPPING.

Long Maple	$ 6 00
Long Birch	5 50
Long Beech	5 00
Tamarack	4 50

LIVERPOOL MARKETS.

Our last advices state that the imports during last month were moderate and the consumption fully up to expectations, and the general feeling is that prices have touched bottom, although there is no prospect of immediate rise. Private sales of St. John spruce deals at £6 per standard, auction sales averaging about £6 3s. per standard, birch from St. John 14½ to 14¾ inch averaged about 16d. per foot.

OSWEGO, N.Y.

Three uppers	$42 00@46 00
Picking	32 00@35 00
Cutting up	22 00@25 00
Fine Common	20 00@22 00
Common	14 00@18 00
Culls	11 00@14 00
Mill run lots	16 00@22 00
Sidings, selected, 1 in	30 00@35 00
" 1½ in	32 00@36 00
Mill run, 1x10, 13 to 16 ft	16 00@21 00
Selected	21 00@24 00
Shippers	14 00@16 00
Mill run, 1¼x10	17 00@20 00
Selected	21 00@30 00
Shippers	14 00@16 00
Mill run, 1 & 1¼ in, strips	16 00@18 00
Selected	22 00@30 00
Culls	11 00@13 00
1x7 selected for clapboards	25 00@35 00
Shingles, XXX, 18 in. pine	4 00@ 4 55
Cedar	3 00@ 3 50
Lath, No 1	2 00@ 2 20
No 2	1 75@ 2 00

CHICAGO.

AT THE DOCKS.

The *Northwestern Lumberman* of Oct. 25th says :—The diminishment of shipments and the prospect for an early shutting down of the mills and cessation of receipts has had the effect to make the market a little more active and a trifle stronger at the prices that have lately prevailed. Piece stuff, green, is still quoted at $8 a thousand, dry dimension selling at $8.50 to $8.75. We hear of three cargoes of dry, sold to arrive, at $9, showing that the purchaser was willing to bid up a little in order to secure what he wanted, since it appeared to him doubtful about his having any further chance this season to make selections on the market. In fact, the time for hanging about the docks and looking out for "soft snaps" in the line of desirable cargoes at very low figures appears to have passed for the season. It is likely that desirable lots of lumber will hereafter sell to arrive at prices a little stronger, and probably higher than have hitherto prevailed.

Shingles continue to arrive in moderate quantity, sufficient to supply the demand, but not so plentifully as to impair the strength which the market recently acquired. Prices are firm at the quotations.

Quotations are as follows :

Piece stuff, green	$ 0 00@ 8 00
Long timber, green	10 00@12 00
Coarse common	9 00@ 9 50
Boards and strips—No. 2 green	9 50@11 00
Boards and strips Medium, green	11 00@15 00
Boards No. 1, green	15 00@18 00
High grade	18 00@22 00
Shingles, standard	1 75@ 1 85
Shingles, Choice	1 90@ 2 00
Shingles, extra	2 00@ 2 20
Shingles, clear	2 80
Shingles, cedar	1 35@ 1 75
Lath	1 25@ 1 40

LAKE FREIGHTS.

Grand Haven by steam	$ 1 12½
" " " sail	1 25
Muskegon by steam	1 12½
" " sail	1 25
Whitehall	1 37½
Ludington	1 50
Manistee	1 62½
Menominee dry	1 50
" green	1 62½
Oconto	1 62½
Cheboygan	1 37½
Alpena	1 75
Bay City	2 00
Frankfort	1 62½

AN THE YARDS.

Shipments from the yards are steadily increasing. There are dealers who say to the contrary, and strongly assert that trade is extremely dull, but the testimony of the majority, and that of one's eyesight, goes to prove that since the beginning of October there has been a constant and increasing improvement.

Receipts of lumber, shingles, etc., from Jan. 1st to Oct. 23rd as reported from the Lumberman's Exchange :—

	RECEIPTS. Lumber.	Shingles.
1884	50,215,000	26,949,000
1883	64,688,000	21,266,000

FROM JANUARY 1, 1884, TO OCT. 23, 1884, INCLUSIVE.

	RECEIPTS. Lumber.	Shingles.
1884	1,560,947,000	741,923,000
1883	1,620,031,000	976,656,000
Decrease	59,084,000	234,733,000

LAKE RECEIPTS FROM JAN. 1 TO OCT. 23.

Lumber	1,548,566,000
Shingles	715,657,000
Lath	55,616,000
Posts	2,422,686
Railroad ties	799,791
Wood, cords	23,676
Bark, cords	20,980
Slabs, cords	37,047
Telegraph poles	136,796
Piles	517
Spars	12

STOCK ON HAND OCT. 1.

	1884.	1883.	1882.
Lumber & timber	665,325,195	611,369,920	660,118,942
Shingles	335,262,075	381,942,939	265,289,150
Lath	63,388,268	54,038,772	52,267,802
Pickets	2,157,347	1,661,537	3,868,270
Cedar posts	458,787	349,493	161,719

FREIGHT RATES TO EASTERN POINTS.

Chicago to—	
New York and common points, per 100 pounds	30c.
Albany	27c.
Boston and common points	35c.
Philadelphia	28c.
Baltimore	27c.
Washington	27c.
Buffalo and Pittsburgh	17½c.
Erie, Pa	17½c.
Dunkirk, N. Y	17½c.

BOSTON.

The *Journal of Commerce* of Oct. 25th says : Trade is moving along quietly and steadily, with considerable building going on in cities and suburbs. Stocks continue quite full, except in some of the best and most desirable grades. Prices keep along without much change to note. Spruce and hemlock boards are held pretty firmly.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

TONAWANDA.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@13 00

BUFFALO.

We quote cargo lots :—

Uppers	$45 00@46 00
Common	17 00@18 50
Culls	12 50@13 00

ALBANY.

Quotations at the yards are as follows :—

Pine, clear, ℔ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	45 00@50 00
Pine, good box	22 00@33 00
Pine, common box	13 00@15 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 16@00 21
Pine, 10-in. boards, 16 ft., ℔ M	28 00@32 00
Pine, 12-in. boards, 16 ft	28 00@32 00
Pine, 12-in. boards, 13 ft	28 00@00 00
Pine, 1¼ in. siding, select	40 00@43 00
Pine, 1¼-in. siding, common	20 00@00 00
Pine, 1-in. siding, select	42 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Black walnut, gook, ℔ M	100 @120 00
Black waluut, ¼ inch	80 00@90 00
Black walnut, ⅛ inch	00 00@85 00
Scaymore, 1-inch	30 00@32 00
Scaymore, ⅛-inch	23 00@25 00
White wood, 1-inch and thicker	38 00@43 00
White wood, ⅛-inch	30 00@32 00
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	80 00@85 00
Cherry, common, ℔ M	25 00@30 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	38 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	4 50@ 4 50
" clear, "	0 00@ 3 00
" cedar, mixed	0 00@ 3 30
" cedar, XXX	0 00@ 2 00
" hemlock	0 00@ 2 00
Lath, hemlock, ℔ M	0 00@ 2 00
Lath, spruce, "	0 00@ 2 25

LIVERPOOL.

The *Timber Trades Journal* of Oct. 11, says : With the continuance of a moderate importation the market shows no alteration in prices, and with the exception of some considerable quantities of oak timber, which are being forwarded up the country, there are no indications of any improvement in business. The demand is dull and languid all around, and no improvement is looked for until the new year. Meanwhile the state of business in the adjacent manufacturing districts continues as unsatisfactory as ever, and so long as this condition of affairs obtains it is useless to look for any improvement in the timber trade.

From the annexed statistics it will be seen to what an extent the demand for all kinds of timber, deals, &c., has shrunk, and with the heavy stocks on hand how remote the probability of any marked advance in prices taking place really is.

There has been no public sales during the past week.

LONDON.

The *Timber Trades Journal* of Oct. 11th says :—Messrs. Churchill & Sim had a very good muster of the trade at the sale on Wednesday, several buyers from the country being on the spot to take advantage of the present cheap prices. Really good stock sold well, though, of course, for common stuff and oddments prices that read absurdly low only were obtained. Amongst these we might put the spruce ex Hudson, which, though described as unsorted, was really what was left after dock selection, and may be described as a very inferior parcel altogether. There were some 4ths amongst them, and these went for very little money. The reserved pine, ex Minnehaha from Quebec, which has only just completed her unloading, seemed to find favor in the room, and a good portion of the 1st quality was sold, the wide stuff fetching £29 15s., 12 ft., and longer lengths £30, this latter figure being about the highest that we have ever recorded in the London public sales for Canadian pine.

The 9 to 11 ft. broad stuff fetched £28 5s., a tall price, showing pretty plainly the great scarcity of the quality and dimensions in the market at the present time.

The Hudson parcel alluded to was submitted with a holding price in the sale of this firm in August last, but did not meet with a single bid.

A lot of first white spruce ex Alma, 13 ft. 3x9, fetched only £7 15s., that a fortnight ago for a lot precisely similar in every respect 5s. more was obtained; but need not be accepted

as illustrating a downward tendency in spruce prices, and is probably due to the chapter of accidents. Taking one with another, however, we find that for such goods as are plentifully represented in the London Dock stocks prices are very unsteady, and continue unreliable, though for scarcer goods values are inclined to advance.

In our list we have the first instalment of the Canadian fall fleet in the shape of a Quebec and a Three Rivers cargo, both for Messrs. Bryant, Powis & Bryant, our old friend the Howling being the earliest forward with pine and spruce.

Spruce keeps low, but there is nevertheless a general increase in buying, and we are informed that round the coast importers are ready to do business at even a shade above late prices. It is usually in this way that any upward movement begins, and the scarcity of stock at the Canadian shipping ports, with the present extraordinary low rates of freight, would appear to warrant some movement of the kind.

AUSTRALIA.

Messrs. Lord & Hughes' monthly circular, dated Melbourne, August 23rd, says:

Refering to business done during the past month, we have now to report sales of every description of timber and building materials have been regular, but not excessive, Oregon showing a small advance, as also does American lumber. Baltic flooring is a little easier, while Baltic dealers and Canadian spruce are a shade firmer.

The future of our market depends on the most careful handling by importers, as the receipts of Baltic flooring and deals promise to be very heavy direct, while the collapse in the Adelaide market is likely to divert many of their shipments to this market.

Deliveries from the yards continue steady, though showing a slight falling-off in quantities. With the opening of our spring, however, we look for an improved demand as money is plentiful and cheap.

The arrivals have been—Passepartout, from Frederickstadt, with flooring; Birchgrove, from Puget Sound, Helicon, from Tacoma, Nanaimo, from Burrard Inlet, with Oregon timber, laths and pickets; Ferdinand, from Boston, with clear pine, white pine shelving, slates and laths; Adelaide, from Adelaide (transhipment ex Edith Carmichael,) with clear pine; Cardigan Castle, Gulf of Carpentaria, Port Adelaide, Kent, River Nith, Ben Voirlich, Thyatira, Miltiades, Macduff, Melbourne, Africa, Andora, Loch Long, Mermerus, Loch Tay, and Fenstanton, from Great Britain, with red deals, flooring, slates, lead, galvanised iron, and cement; Adelaide, Franklyn, Victorian, Claud Hamilton, from Adelaide, with Baltic deals, Waitemata, from Kaipara, with Kauri pine and pickets; May Newton, from Richmond river, with cedar; Cheviot, Rodondo, Wendouree, Fitzroy, Gabo, Leura, City of Adelaide, Cahors, Nemesis, and Buninyong, from Sydney, with cedar, laths, lead, Galvanised iron, and cement.

Red Deals —20,228 pieces from the Baltic, 336 pieces from the United Kingdom. The arrivals have been Adelaide, Franklin, Victorian and Claud Hamilton, from Adelaide, with transhipments from the Baltic; Mermerus, from United Kingdom. Sales by auction have been ex Leviathan, from Laurvig; Adelaide, Franklin and Victorian from Adelaide. W S W brand, 9x3, 6d. to 5½d.; 7x2½, 5½d. to 5d.; P x H, 9x3, 5 11-16d.; 11x3, 6d.; 7x3, 5⅝d.; 7x2½, 5 5-16d. to 5¼d.; WTW, 9x3, 4 13-16d.; 11x3, 5¼d.; 7x2½, 4⅝d.; 9x4, 4 9-16d.; TWF, 10x3, 3½d.; 9x3, 3 3-16d. to 3 1-16d.; FWT, 11x3, 3¼d.; 9x3, 3 1-16d.; TWF, 11x3, 3⅛d.; 9x3, 3¼d.

Spruce Deals.—Imports: Nil. The only public sale has been the parcel of 11x3 and 9x3, ex Saml. Skolfield, on 8th instant.

Oregon Timber.—Imports: 1,374,565 feet super. The arrivals have been Birchgrove, Helicon and Nanimo. Sales by auction since our last report have been the cargoes ex Birchgrove and Minnie Carmichael, at an advance on last months rates, viz., £6 17s. 6d. to £6 5s., and the balance of cargoes ex Howard D. Troop, at £6 5s. to £6 2s. 6d. The cargo ex Nanaimo, is advertised for sale on 26th instant, and that ex Helicon on 29th instant.

Lumber.—Imports: Clear pine, 156,735 feet super; white pine shelving, 57,281 feet super. On 8th inst. the shipment ex Saml. Skolfied was sold at auction, showing an advance on last month's rates on nearly every line, and yesterday the parcel ex Adelaide, from Adelaide, and Ferdinand, from Boston, were offered, but only portions of each were quitted.

Pitch Pine.—Imports: Nil.

Redwood.—Imports: Nil. The only sale by auction has been small line 2½ in., at £10 per 1,000 feet super.

Flooring and Weatherbords.—Imports: 1,823,428 feet lineal. The arrivals have been Passepartout, from Frederickstadt; Thyatira, Loch Long, Mermerus, and Loch Tay, from Great Britain. The cargo ex Passepartout is advertised for sale on 26th inst. Sales by auction during the month have been ex Ernst, Atlantic, and Loch Long, and prices realized were as follows:—Red, 6x1⅛, at 10s. 3d. to 9s.; 6x⅞, 8s. to 6s. 9d.; 6x¾, 5s. to 4s. 11d.; 6x½, 5s. to 4s. 1d.; 4-out weatherboards, 6s. 6d.; white, 6x1⅛, 8s. 9d. to 8s. 6d.; 6x⅞, 7s. 9d. to 7s.; 6x¾, 5s. 6d. to 4s. 9d.; 6x½, 4s. 8d. to 4s. 4d.; 4-out weatherboards, 6s. 4d. to 6s. 3d.

Kauri Pine.—Imports: 309,810 feet super. The only arrival has been Waitemata, from Kaipara. Sales by auction during the month have been very limited, being confined to balance of logs ex Killarney, at 15s. to 14s. 9d.; and balance of shelving ex Naiad.

Cedar.—Imports: 152,800 feet super. The arrivals have been May Newton, from Richmond River, and various coasting steamers. Sales by auction of various parcels, logs and sawn boards have been made.

Doors.—Imports: Nil.

Laths and Pickets.—Imports: Laths, 15,129 bundles; Pickets, 10,651 bundles. The arrivals during the past month have been heavy being principally—Nanaimo, which brought fully half the above quantity; Ferdinand, from Boston, and various steamers from Sydney. Sales by auction have been made of Oregon laths, 4½-ft., 33s. 9d. to 32s. 6d.; spruce laths, 4½-ft., 33s. 3d.; Oregon pickets, 4½-ft., £8 7s. 6d. to £8; 6-ft., £10 10s.

Slates.—Imports: 442,950 pieces. The arrivals have been River Nith and Andora, from Liverpool; Ben Voirlich and Thyatira, from London, and Ferdinand, from Boston. There have been no sales by auction during the month.

Plaster.—Imports: 70 barrels. The only sale publicly of plaster has been small parcel, ex Anahuac, King's Windsor Mills plaster, all faults, at 9s. 3d. per barrel.

Cement.—Imports: 13,441 barrels. The arrivals continue heavy, and there is no improvement in the market to report. No sales by auction have taken place, and transactions privately have been chiefly of small parcels, Knight, Bevan & Co.'s realizing up to 15s. 3d.

Galvanized Iron.—Imports: 2,379 tons. Arrivals continue large and the market depressed. Several small lines Orb have been sold privately at prices not transpired. Prices range from £21 to £19, according to brand.

Explanation.—Red deals and spruce deals are sold at per foot of 9x3; T. and G. flooring at per 100 feet running; Oregon timber, red wood, clear pine, shelving, ceiling, per 1,000 feet super; Kauri pine and cedar logs at per 100 feet super; laths, pickets, and slates at per 1,000 pieces.

Drying Wood in Sand.

An eastern contemporary says that small pieces of wood, such as are used by joiners and furniture makers, can be readily and effectually dried by being placed in dry sand, and then heated to 100 degrees. By this process the sand acts in the manner of an absorber of the moisture, as well as a diffuser of the heat, and the effect is uniform and complete.

Loss of Flesh and Strength,

With poor appetite, and perhaps slight cough in morning, or on first lying down at night, should be looked to in time. Persons afflicted with consumption are proverbially unconscious of their real state. Most cases commence with disordered liver, leading to bad digestion and imperfect asimilation of food—hence the emication, or wasting of the flesh. It is a form of scrofulous disease, and is cured by the use of that greatest of all blood-cleansing, anti-billous and invigorating compounds, known as Dr. Pierce's Golden Medical Discovery.

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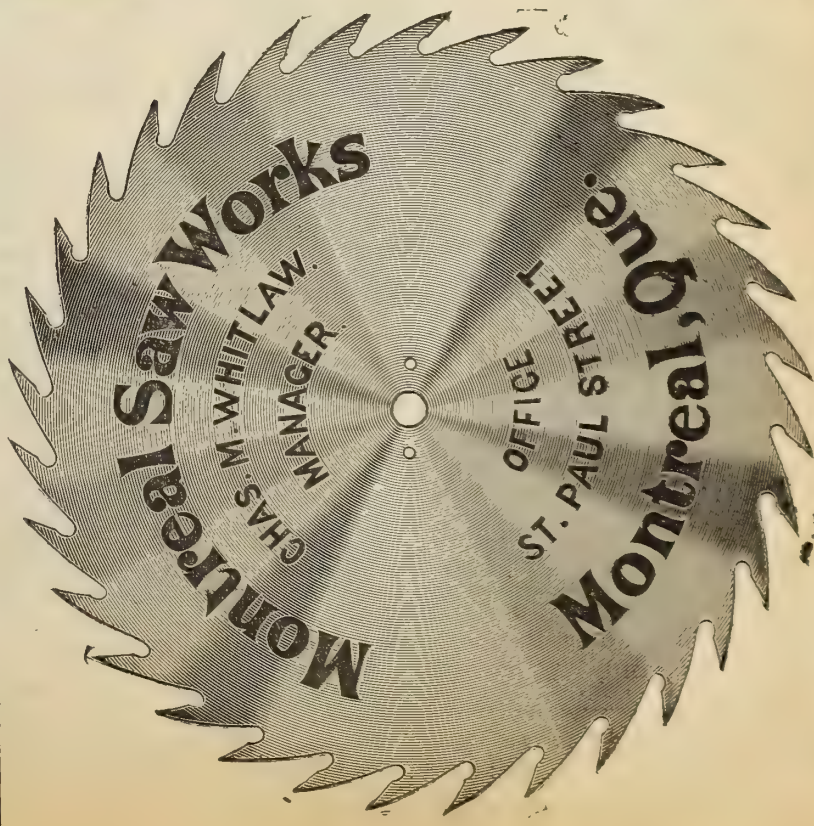
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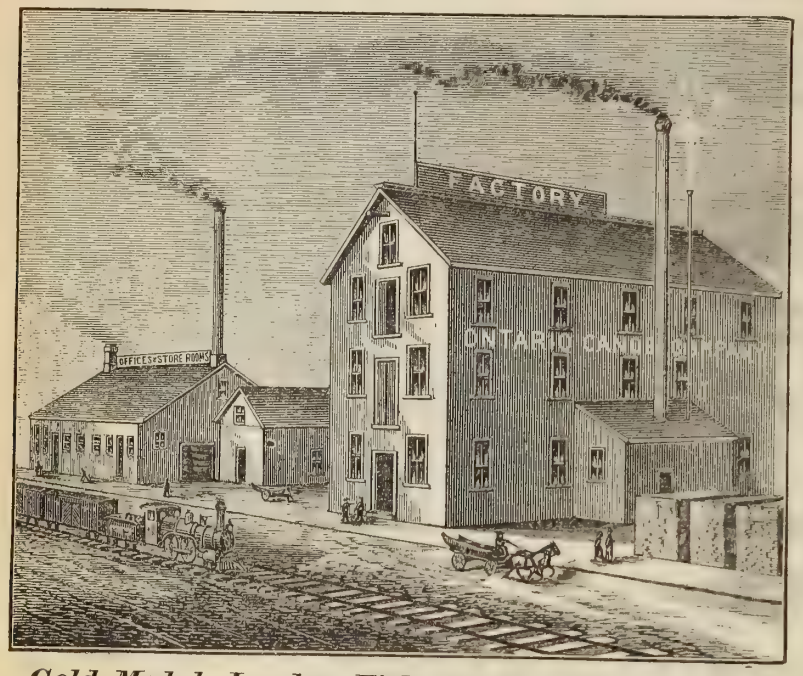
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LUMBERMEN'S TENTS

The Cheapest and Best in the Market!

32 First Prizes AND 6 MEDALS.



AT HALIFAX AND TORONTO, *1883.*

Tents, Flags, Tarpaulins, Waterproof Goods, Camp Furniture, etc., etc.

Estimates for Circus Tents, Range Marquees, Hand-made Sails, etc., furnished on application. Liberal Discount to Large Buyers.

PORTABLE CANVAS BOATS MADE TO ORDER

Send for CATALOGUE AND PRICE LIST.



SEE OUR NOVELTIES IN Camp Furniture!

At Toronto, Ont., and St. John, N.B., we made the best Display of Tents ever shown in Canada—and we never substitute an article inferior to sample in filling orders.

We control "THE LATOUR PAT." for Camp Furniture, the best on earth. The only Gold Medal ever given for this class of goods was awarded to the Latour Camp Furniture at Toronto in 1882.

SAIL-MAKING.

We have secured the services of the best practical sail-maker in Canada. Orders in this line will receive prompt and satisfactory attention, as is usual with all orders entrusted to us.

Agency for the WILDERMUTH BED SPRING, the best in the Market.

A. G. FORGIE, MANAGER,

International Tent & Awning Co.,

184 SPARKS STREET, OTTAWA.

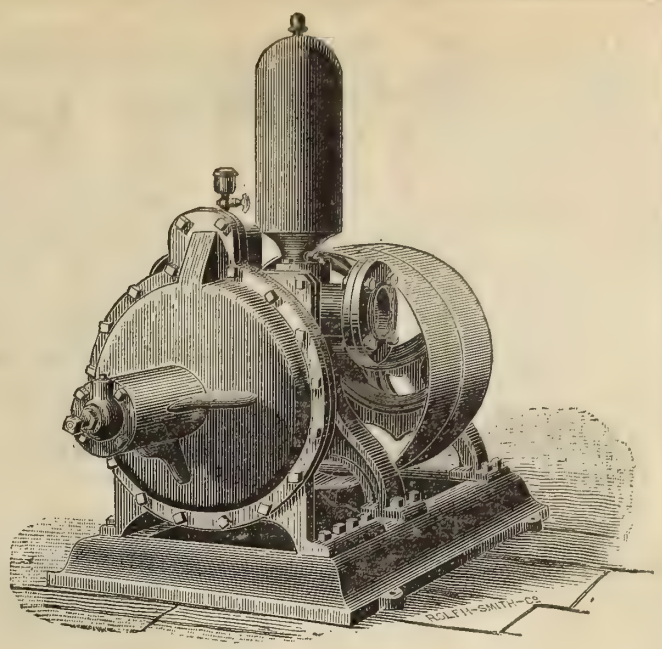
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Central Iron Works

SIMCOE STREET

PETERBOROUGH, Ontario.

WM. H. LAW, PROP'R.



PROTECTION FROM FIRE

An Improved Rotary Piston Force Pump.

No.	Diameter of Pipes.		No. of Revolutions.	Capacity per minute at table speed.	Price.
	Suction.	Discharge.			
2	2½ in.	2 inch.	250	125	$100
3	4 "	3 "	250	250	150
4	5 "	4 "	250	400	225

☞SEND FOR CIRCULAR.

MANUFACTURER OF

Engines, Boilers, Pumps, Saw Mill Machinery

STEAMBOAT PROPELLERS AND ENGINES.

CASTINGS

For Architectural Works, &c.

IRON ROOFING AND BRIDGES,

AND ENGINEERING WORK IN GENERAL.

Why do You Suffer when you May be Cured by Electricity?

Without loss of time or great expense. Ten or Twenty Dollars spent in ELECTRIC BELTS will do you more good than a hundred expended any other way.

CRYING BABIES.—Babies cry because they suffer. Their little gums are inflamed, and their bodies are more or less feverish. If you will tie around their necks one of NORMAN'S ELECTRIC TEETHING NECKLACES you will see a wonderful change for the better, their sufferings cease, and their general health improves. Ask for Norman's, and take no other, and you will be pleased. Price 50c.

FEVER AND AGUE.—Do not throw away money on worthless remedies, when NORMAN'S ELECTRIC BELTS will cure you. Use one and you will find immediate benefit. Every one is guaranteed.

LUMBAGO.—Those who suffer from this disease will find a friend in NORMAN'S ELECTRIC BELTS when all other remedies fail. Ask your druggist for it, and take no other. Guaranteed.

CONSTIPATION AND BILIOUSNESS and all disorders of the Stomach and Liver are corrected by using NORMAN'S ELECTRIC BELTS. Try one and be convinced. Guaranteed.

FEMALE TROUBLES.—Ladies are benefited more by NORMAN'S ELECTRIC BELTS than by all the science of medicine. They are comfortable and durable. Guaranteed.

WEAKNESS and Lassitude yield to the influence of NORMAN'S ELECTRIC BELTS when all other remedies fail. Try one and you will suffer no longer. Every belt guaranteed.

NERVOUS DEBILITY.—This dreaded and miserable disease is immediately relieved by the use of NORMAN'S ELECTRIC BELTS. Ask for them, take no other. Every belt guaranteed.

INDIGESTION AND SLEEPLESSNESS.—This seven headed monster is more easily overcome by the use of NORMAN'S ELECTRIC BELTS than any other remedy, and it possibly cannot do any injury. Guaranteed.

RHEUMATISM cannot remain long with any one who uses NORMAN'S ELECTRIC BELTS, and Neuralgia is driven away like smoke before the wind. Give one a trial. Every belt guaranteed.

NERVOUSNESS may be entirely cured in a short time by using one of NORMAN'S ELECTRIC BELTS, without any fear of injury. Try one and be convinced. Guaranteed.

TESTIMONIALS—A few Sample Testimonials that speak for Themselves.

MR. A. NORMAN, WALLATTA, D.T., December 17th, 1883.
DEAR SIR,—I am happy to inform you that the Appliances I got from your Chicago agent have had a most marvellous effect upon my patient who suffered from Sciatica. He could get very little relief from medicine. Shortly after he got your belts he was able to get out of bed, and is now on a visit to his Canadian friends. Send me some more circulars. Yours truly, DR. D. McLACHLAN.

MR. NORMAN, PERTH, ONT., June, 1883.
DEAR SIR,—I have been wearing your Electric Insoles for about six months, and have been greatly benefited by them. I recommend them to all who suffer from Rheumatism. Yours truly, MRS. J. GUTHRIE.

A. NORMAN, ESQ., OTTAWA, September 3rd, 1883.
DEAR SIR,—I have experienced considerable benefit from your Appliances. I feel stronger and better every way. Yours truly, R. E. HALLIBURTON.

A. NORMAN, ESQ., PETERBOROUGH, October 15th, 1884.
DEAR SIR,—Soon after I commenced to use your Electric Appliances they opened my bowels, cured my cough and cold, relieved my head, and considerably relieved my catarrh in consequence. The discharges from my head and chest are now easy, and I feel altogether better. My digestion has improved, my stomach is less sour and windy, and I am less troubled with lascivious and vivid dreams. I had previously tried almost all the advertised patent medicines without deriving any good. Yours truly, J. GREEN.

☞CURATIVE BATHS: Electric, Vapor, Sulphur, and Hot and Cold Baths.

Baths have been admitted in all ages by every school of medicine, to be one of the best means of curing ailments, maladies and diseases. The Electric Bath is the latest and best discovery in this line. Come and try them. Consultation free. Circular on application.

A. NORMAN, Proprietor, 4 Queen Street East, Toronto.

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NORTHEY & CO'S STEAM PUMPS, TORONTO, ONT.

Pumps for Fire Protection a Specialty.

SAVE INSURANCE.

Our Combined Boiler Feed and Fire Pumps are a NECESSITY IN EVERY WELL ORDERED STEAM MILL or FACTORY.

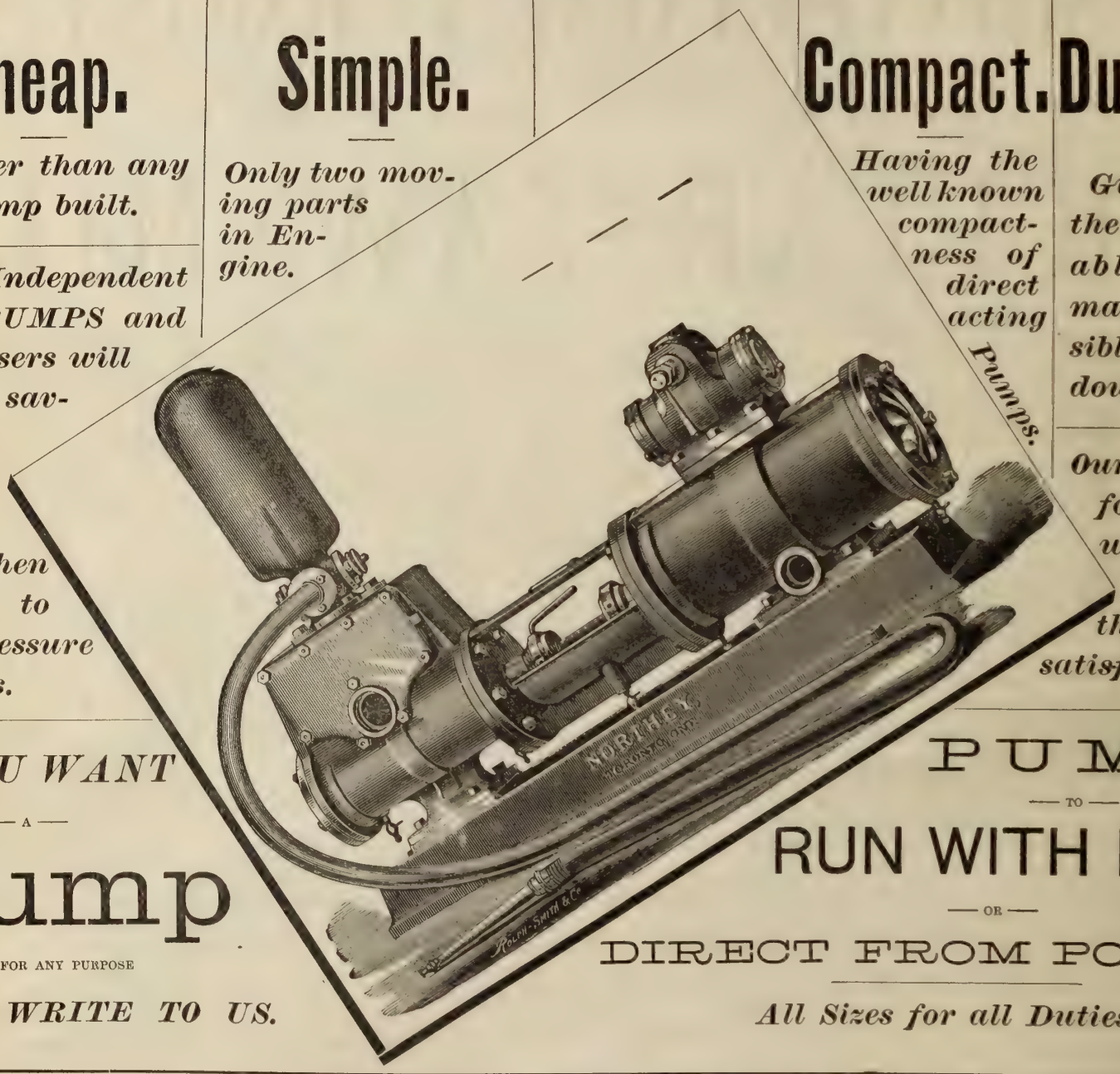
Cheap.

Cheaper than any Pump built.

Our Independent AIR PUMPS and Condensers will effect a saving of 30 to 50 per cent. when applied to high pressure Engines.

Simple.

Only two moving parts in Engine.



Compact.

Having the well known compactness of direct acting Pumps.

Durable.

Guaranteed the most durable Pump made; impossible to break down.

Our PUMPS for general water supply give the greatest satisfaction.

IF YOU WANT

— A —

Pump

FOR ANY PURPOSE

☞ ***WRITE TO US.***

PUMPS

— TO —

RUN WITH BELT

— OR —

DIRECT FROM POWER

All Sizes for all Duties.

Our make of Pump is specially adapted to Mills in out of the way places, as they can be absolutely relied on, and occasion no vexatious stoppages for repairs.

WE INVITE CORRESPONDENCE ON ANY POINT CONNECTED WITH PUMPS.

SEND FOR CIRCULAR AND STATE YOUR REQUIREMENTS.

NORTHEY & COMPANY,

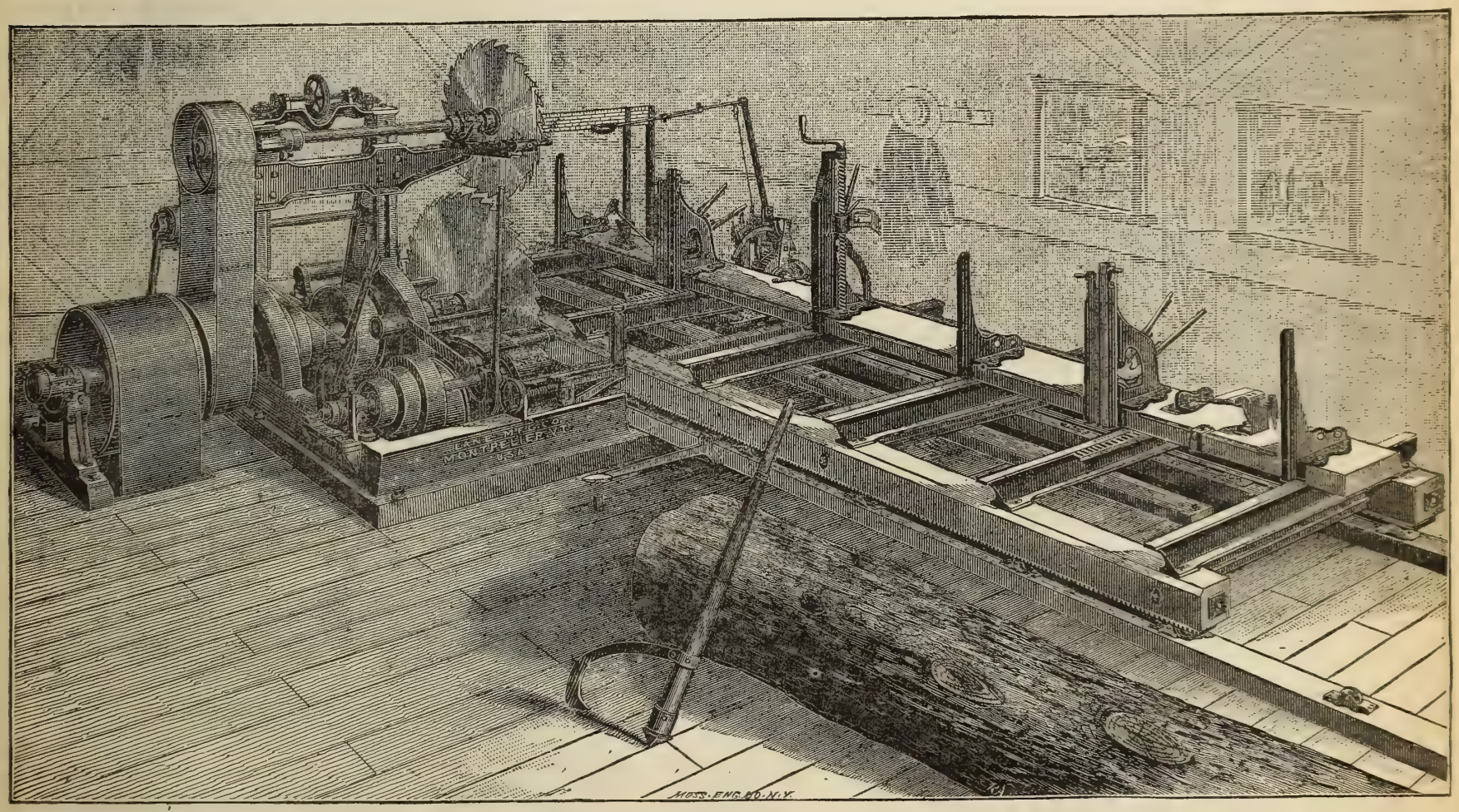
Corner FRONT & PARLIAMENT STS., TORONTO, ONT.

THE LANE MANUFACTURING COMPANY!

MONTPELIER, VERMONT,

MANUFACTURERS OF LANE'S CELEBRATED

CIRCULAR - SAW - MILLS



Circular Saw Mills,
Saw Mill Set Works,
Double and Single Traveling Bed Planers, Shingle Bolters,
Bed Timber Planers,

Clapboard Machines,
Clapboard Planers,
Stationery Bed or Roll Feed Planers,
Drag Saw Rigs,

Shingle Machines,
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Double and Single Power Feed Edgers,
Mill Supplies, Etc., Etc.

FOR DESCRIPTIVE CIRCULARS AND PRICE LISTS, ADDRESS:

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The William Hamilton Manufacturing Company, Limited

MANUFACTURERS OF

SAW MILL & GENERAL MACHINERY

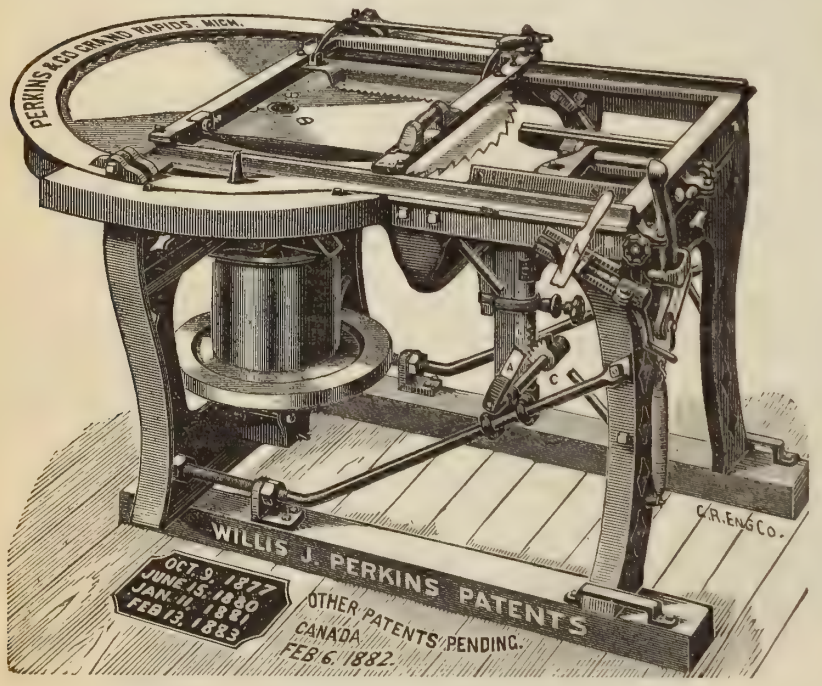
OUR SAW MILL ENGINES are made Strong, Neat and Durable, knowing well the ever varying Strain they are subjected to in driving a Saw Mill.

We wish to call the attention of our Canadian Lumbermen to our First Class HEAVY SAW MILL MACHINERY for Circular Mills and Circular and Gang Mills of the most improved designs. We are prepared to submit Plans and Specifications, together with any information that our many years of close application to the Saw Mill Business may have suggested to us, also when required to enter into contract for building and supplying the machinery complete, superintending the starting of the same, and handing over the mill to its owner in first-class running order.

Besides the variety of Machines we build for the manufacture of lumber we have added to our list the

PERKIN'S PATENT SHINGLE MACHINE.

aving obtained the sole right to manufacture and sell for the ominion. Also Drag Saws, Bolters, Sappers, Jointers and Packers.



GRAND TRIUMPH.

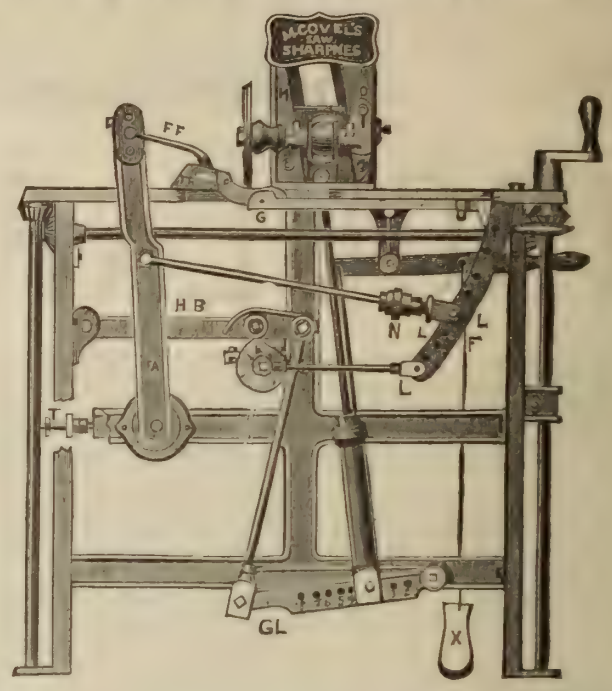
Willis J. Perkins' Drop Tilt !

The only Horizontal Saw Machine on which a thick slab can be cut from the bolt.

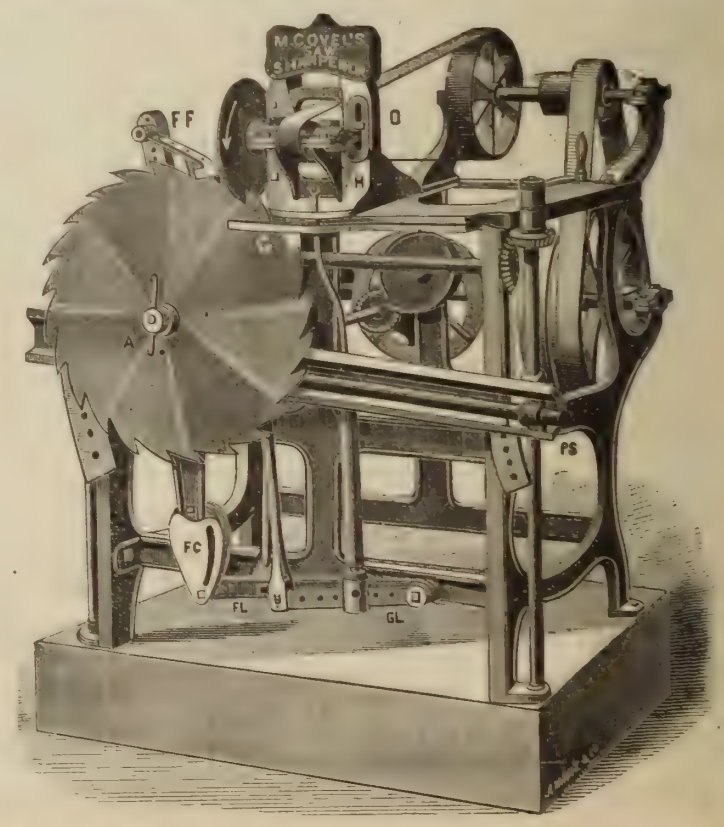
☞ *SECOND CUT ALWAYS A SHINGLE.*

Knots, rots, hearts, bolt squared rift-ways, and all irregularities cut off at one clip. This improvement will pay the price of the whole machine every season by increase of quality and quantity cut

The M. Covel Patent Saw Sharpener.



The above Cut No. 1 shows some very important changes that have lately been made, which makes the machines far less complicated for new beginners to operate. Cut No. 2 shows this machine with a circular saw upon it ready for operation.



THE WILLIAM HAMILTON MANUFACTURING CO.

PETERBOROUGH, ONTARIO.

SOLE MANUFACTURERS AND AGENTS FOR THE DOMINION

Send for Price List and Circular.

THE CANADA LUMBERMAN

AND MILLERS' MANUFACTURER AND MINERS GAZETTE

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada

SUBSCRIPTION $2.00 PER ANNUM

VOL. 4. PETERBOROUGH, ONT., NOVEMBER 15, 1884. NO. 22.

THE MILLS AT LAKE WINNIPEG.

The Selkirk *Herald* says: During the past season lumbering operations have been carried on pretty lively on Lake Winnipeg, as well as about Selkirk. The various mills on the lake with one or two exceptions have been busy since the opening of the season, and a considerable quantity of lumber has been cut, more being brought into Selkirk this summer than last year. One or two firms have experienced difficulties this season that have deterred them from doing the amount of cutting expected, besides being at some loss in consequence, through extra wages and other expenses. The fleet of steamers plying on Red River and Lake Winnipeg have nearly all been actively engaged towing in the barges of lumber for the companies having mills on the lake, and are now making efforts for a good winding up of the season's work.

A large portion of the lumber brought in from the lake has been transhipped at Selkirk for Winnipeg and other places, while some still remain here to supply local trade or to be shipped.

The facilities afforded at Selkirk for the transfer of lumber from the river conveyances to the cars, as well as the ground for piling, etc., are the best, and cannot be surpassed. The business on the Selkirk and Winnipeg railway has been very much increased by the transhipment of lumber here, every train showing evidence of this fact.

While a great quantity of lumber has been cut and brought in this season, it is understood that the demand has not been at all equal to supply and consequently considerable still remains on hand. Most of the firms have been operating largely on Lake Winnipeg, have decided to retrench during the coming winter, and, so far as has been learned, intend to do little or nothing in the way of getting out timber for next season's cutting. Some of them may have logs left over from this summer's cutting, but it is not understood so, and the chances are the mills will not have so much to do next year.

THE ENGRAVER'S WOOD.

Boxwood, on which the engravers make such fine wood engravings for the magazines and illustrated newspapers, is imported mostly from the Mediterranean shores of Spain and Turkey. It comes in small blocks of a roundish but irregular form and perhaps half an inch thick. This shape represents the outline of the tree trunk or main branch, from which they were sawed off. The box tree, as a good many readers may not know, is a variety of the odorous dwarf box, which, only two or three feet high, is cultivated in this country in gardens and used for forming edgings for flower beds and gravel walks; and even the tree from which the wood is cut for engravers' use never grows to any large size; twenty feet is about its height. It is, moreover, a slow growing tree—as trees having very hard, dense wood usually are—and it need not be surprising therefore, that the largest blocks imported for the engravers rarely exceed five inches in diameter, and on an average not over four or five. In making a picture large enough to cover a magazine page a good many separate bits of engraved wood have to be used. Putting those together so that every part fits exactly, and no white lines show in the printed picture, is a trade in itself. One printing firm in New York keeps half a dozen men employed at it. In electrotyping the engraving, the electrotyper often renders a skilful service in perfecting these joints so that the sharpest eye cannot detect the places of union.

Boxwood, being of such slow growth, is becoming scarce. The supply does not keep pace with the modern demand. Some substitute is anxiously looked for, and even celluloid is being tried in some experiments, but to no promising results. Meanwhile the whole art and method of producing printed pictures, already somewhat modified by photo-engraving and other devices, is likely to be superseded, within a few years, by some new and less slow and costly method.

PAYING METHODS.

The *Northwestern Lumberman* pays the following compliment to Canadian lumber manufacturers:—

"We learn that Mr. J. K. Ward, of Montreal, Quebec, sold a lot of deals at $128 for 1sts, $80 for 2nds and $40 for 3rds. These are probably the highest prices obtained in Canada for deals this year; and such figures were possible because the timber was first-class and properly manufactured. The leading Canadian saw-mill men seem to understand the importance of turning out perfect stock. So proud are some of them of their work that they stamp every board that is sent to market. They use the best of machinery and demand carefulness on the part of their employes. The fact is nowhere understood better than in Canada that such a method pays."

DON'T LET THE LOGS LIE.

The Ottawa *Free Press*, refering to the throwing of mill refuse into streams, gives the following reasons why logs should not be allowed to lie in the woods:—

"The only good which can be said to arise from this drifting of dead, and very shortly after injection from the mill, water-logged refuse, is that it furnishes in poor compensation for its grievances a small amount of wood, which the farmer utilizes as kindling for his household fires. Yet what an irreparable loss is, we may consider by this apparently harmless and gratis acquisition, affixed to our overloaded forests. The farmer, instead of availing himself of the proximity of the forest, laden and embarrased with the fallen growth of centuries, prefers gathering what is as he considers—providentially or improvidentially, as the case may be driven to his shores—while in so doing he strips his forests of a very important factor to their growth and continuance by permitting the fallen and dead timber, not only to disfigure the beauty of a properly attended forest growth, but to check quite preceptibly and irrevocably the under or young growth of incidious or coniferous woods. Besides this rude carelessness to the proper attendance of the growing trees, the older are subjected to no less disastrous drawbacks to their natural development because the ground and their roots thus burdened with the decaying moss of centuries cannot receive that benefit from external and natural causes, such as rain, the sowing of seeds, etc., which consequently is refused them as promoters to their increase and fecunity. For an example of the correetness of this assertion we have but to investigate any of the finely tended forests of the old world and compare them to our own.

OTTAWA NOTES

The old lumber firm of Johnathan Francis & Co., doing business on the Madawasca River, has been dissolved by mutual consent. Mr. Francis has retired from the firm and is succeeded by his son, Mr. Harry A. Francis, Mr. Jas. Carswell, of Renfrew, and Mr. W. R. Thistle, of Ottawa. The style of the new firm is Francis, Carswell & Co. They are erecting a steam saw mill with a cutting capacity of 30,000,000 feet, on Calabogie Lake, to be completed in the spring. In future their Madawasca logs will be cut there and shipped *via* the Kingston and Pembroke Railway.

Two rafts of small square timber were sold at Calabogie Lake, delivered on board K. and P. cars, at 16 cents per foot this fall. They were rafted again at Kingston and used to float a raft of oak to Quebec.

Mr. Peter McLaren, of Perth, talks of building a large steam saw mill at or near Calabogie Lake next season.

The American boatmen now in Perth are on a strike for higher freights.—*Ottawa Citizen.*

READING FOR THE LOGGERS.

The following is from the Milwaukee, Wis., *Journal*: "What are those for?" I asked Secretary Willis of the Young Mens Christian Association, yesterday, as he received a huge package of old newspapers and magazines. 'For the lumbermen,' he answered. 'These are only a few in comparison with the many that are denoted by friends that are disposed to help us in humanizing the men that go into the woods in the winter. Last winter I was at Chippewa Falls and a man came down from a large lumber camp. He told a story of a camp; how there was 60 men in the shanties, and nothing in the shape of reading matter, but a single copy of Robinson Crusoe in the camp; how 15 or 20 men would try to read it at once. This gave us the idea, and since then we send as many papers and magazines as we can get. In northern Wisconsin there are 40,000 lumbermen, who work in the woods. The majority of them go in about December 1st and come out about April 1st, sometimes sooner, sometimes later, as the winter is long or short. Many of the associations of the state send boxes of reading matter, consisting of religious weeklies, Youth's Companions, Harpers Publications, odd copies of the Century, etc., to some central point, where there is a secretary in charge of the lumbermen's work. Most of the Milwaukee donations go the Eau Claire. The secretaries in charge there start out in a cutter with a supply of the papers, and drive to lumber camps, where they leave a part of their stock and spend the night, generally holding services; each day they visit a new cam, and so on until the supply gives out. In this way a wide circulation is given to the reading matter."

REVIEWS.

LUMBER DIRECTORY.—We have received from the publishers, Messrs. Rand, McNally & Co., of Chicago, a valuable work called "The Directory and Shipping Guide of Lumber Mills and Lumber Dealers in the United States and Canada." It contains a complete list of saw mills, shingle mills, stave mills, planing mills, sash and door and blind factories, and dealers in lumber, together with the laws for material, men, and a digest of the statutes affecting lumbermen and lumbering, also the railways express companies to every town or city wherein these interests are located. It is conveniently arranged alphabetically as to states, towns and names. We miss some few names, but this is explained by the neglect of firms omitted to answer the circulars sent to them. It will be most useful and indeed indispensible to those in the timber trades of this continent or connected with them.

Toronto's Lumber Trade.

The Toronto *Telegram* says:—The lumber export trade of Toronto is being rapidly diverted to Port Hope. In the past the Northern railway carried large quantities of lumber to this city when it was shipped by schooner to Oswego. The Midland railway now controls the trade and the loading and unloading are now done in Port Hope.

THE lumber in Mr. Churche's yard and saw mill, Bright, was destroyed by fire on Oct. 31st. Loss, $14,000; no insurance. Supposed to be the work of an incendiary.

HEATING SURFACE OF STEAM BOILERS.

We are frequently asked to give a rule for computing the heating surface of tubular steam boilers. The matter is very simple, but the following explanation and example will probably be of service to many engineers.

The heating surface of a steam boiler of any kind is the surface exposed to the action of the fire which has water on the other side. The extent of this surface is measured exactly the same as any surface would be.

For instance, we have a boiler 60 inches in diameter, with 66 tubes 3 inches in diameter and 15 feet long; what is the amount of heating surface?

The operation of finding the effective heating surface in this case is best divided into three parts.

First—The surface of the shell. As the brickwork is, or should be, closed in at the center of the shell, we have as the effective heating surface one half the circumference of the boiler multiplied by the length of the tubes, that being the length of shell exposed to the fire. One-half circumference of shell 5 feet diameter, = 7.85 feet; length of shell, = 15 feet; 7.85x15= 117.75 square feet in shell.

Second—That portion of the two heads between the two tubes. As the water line comes but slightly above the centre of the boiler, we usually assume it is half way. Then we have a susface equal to one entire head of the boiler covered with water and exposed to heat. A tube sheet 5 feet in diameter = 19.63 square feet; 66 tubes 3 feet in diameter = 3.23x2=6.46 square feet; total heating surface on heads= 13.17 square feet.

Third—The tubes. It is usual to reckon the inner surface of the tubes as heating surface. Then we have 66 tubes each 15 feet long. 66x15 = 990 feet of 3-inch boiler tubes. By the manufacturers' standard table the length of three inch tube required for one square foot of inside surface=1,373 feet. Then 990 divided by 1,373 = 721 square feet in the tubes.

Adding the above together we have—

For the shell, 117.75 square fcet.
For the heads, 13,17 square feet.
For the tubes, 721.05 square feet.

Total, 851.97

We must proceed in a similar manner to obtain the heating surface of any boiler whatever. Usually about 15 square feet of heating surfac in a tubular boiler is reckoned equal to one nominal horse power.—*Locomotive.*

CANADIAN SUPPLIES.

Dr. Lyons, M. P., writing in the *Timber Trades Journal* on the forest areas in Europe and America, and the probable future timber supplies, concludes with the following regarding Canada:—

"The call which for some years back has been made on Canada is perhaps the most serious problem in the question of future timber supplies. That she is very largely supplementing the requirements of the Union is well known, but to what extent it is very difficult to ascertain, as a very extensive trade is carried on across the borders and much timber shipped from American ports and credited to the States has but recently been brought within the States. Three very extensive timber agencies are well known: the "Ottawa Agency," the "Belleville," and the "Western Timber District." The Crown Timber Offices acts for the provinces of Ontario and Quebec and for the Dominion Government in the collection of State dues. The Ottawa draws about 8,000. Over four-fifths of the pine shipped to the United Kingdom is reported to be manufactured in that great valley, which is said to give occupation to 25,000 men. The area of the timber lands of the Dominion is roughly estimated at 280,000 square miles. It cannot be said that the valuable forest areas of Canada have as yet been defined by survey perpetrators has been satisfied with inspection of the tremendous ravages and grandeur of the scene thus criminally and wantonly produced.

No unified system of forest statistic exists for the Dominion as yet. Each province keeps for itself such records as it possesses. By the kindness of the Governor-General and Council this is about to be remedied, and I hope through with sufficient accuracy. It is stated that the true forest area would scarcely cover a tenth part of the surfaces. The great Saskatchewan Vally, equal to thirteen states of the size of New York, is returned as chiefly prairie, and practically treeless. Oak crosses the border from Michigan and Ohio. It is asserted that in the provinces of Ontario, Quebec, New Brunswick, and Nova Scotia, the pine and spruce, the great material of foreign export, and under contribution for more than a century, will be entirely cut within a few years. Little and others assign a limit of seven years. The wooded lands are still counted at millions of acres, but in both the States and Canada unknown quantities of mere coppice and scrub exist, the timber of which would not pay its own transport to most moderate distances; while millions of acres still counted as forest are in the state of charred remnants of forests burned over for miles upon miles, and the timber of which has been totally destroyed. The recklessness of waste and belief in inexhaustibility cannot be more strikingly illustrated than by the well-known incident of forests set on fire purposely to show the grandeur of the scene, and allowed to burn themselves out without thought of rescue, when the curiosity of the his Excellency's kindness to be shortly in possession of full details as to the forest wealth of the Dominion.

By a recent Act, assented to in the current year, 19th of April, 1884, full power is given to the Governor in Council to make provision for the preservation of forest trees on the crests and slopes of the Rocky Mountains, in order to maintain throughout the year the proper volume of water in the rivers and streams, and to set aside and appropriate adjacent lands as forest parks.

With every state in Europe and America, and with the example of the great forest system of India before us, not yet forty years under conservancy, shall these islands alone stand aloof from the great work of forest conservancy and extension? Out of 77,000,000 acres it is possible for England, Ireland and Scotland to contribute, with advantage to their industries as well as their agriculture, something like 20,000,000 of home grown forests. The annual importation of timber and other forest produce reaches the enormous sum of £20,000,000 sterling per annum. The day her industries are paralized by failure of timber, now within measureable distance of us, this Empire must descend from her high place among the nations.

TRADE WITH THE ARGENTINE REPUBLIC.

The following letter appears in the Quebec *Cnronicle*:

SIR,—A glance at the statement of shipments of lumber from the St. Lawrence to the ports of the Argentine Republic for the past season, will, I doubt not, prove interesting to all that have at heart the development of Canada's foreign trade.

On reading over the statement above alluded to, one must necessarily be struck with the immense increase in value of the exports of lumber over the preceding years, but while acknowledging with pleasure this fact we have also deeply to regret that our enterprising manufacturers have as yet taken no steps whatever towards introducing the results of their labour to the markets of this fast growing and progressive Republic. The port of New York alone exported to the country referred to, during the past year, $4,000,000 worth of manufactured goods, nearly all of which are produced in this country. These consisted mainly of agricultural implements, edge tools, machinery of all kinds, barb-wire, fencing, nails, tacks, boots, shoes, prints, twillings, shirtings, preserves of different kinds, canned goods, and an infinity of other articles, most of which are manufactured or to be found in Canada. The question must therefore present itself: Why does Canada not participate in this important export trade?

The Argentine Republic is one of the most prosperous countries of the day; its exports and imports are immensely on the increase. New harbors are being opened; new cities built; railway lines traverse the country in all directions; ships of all nations crowd its ports and a steady tide of immigration is fast peopling the country. Seven hundred large steamships visited its capital, Buenos Ayres, during the past year,—in a word everything in and about the country proclaims activity, energy, and a spirit of progress hardly appreciable to anyone unfamiliar with this favored country.

It therefore behooves cur Canadian manufacturers to at once take the necessary steps towards introducing their wares in this Republic, which in a very short time will be made a large and valuable consumer. All information regarding the cost of transportation, duties, etc., etc., can be obtained at any of the Consulates of the Republic in the Dominion, and I shall be more than pleased to give not only all the information in my power, but will also personally assist by every possible means the favorable introduction of any of Canada's products, and the development of a trade in manufactured goods between the two countries.

With many apologies for trespassing so much on the space of your much-read paper, and thanking you sincerely for the previlege accorded me.

I have the honor to remain,
Sir,
Your obd't servt.,
J. ARTHUR MAGUIRE,
Consul-General of the Argeutine Republic in Canada, etc.

Quebec, October 31st, 1884.

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c, measured and culled to date:—

	1882.	1883.	1884.
Waney White Pine..	3,104,648	3,513.515	2,198,453
White Pine.....	7,961,695	7,130,419	3,686,744
Red Pine.....	1,456,850	474,458	327,735
Oak	1,313,109	1,888,294	772,042
Elm.....	714,549	309,261	653,812
Ash.....	310,769	257,827	410,458
Basswood	1,471	2,244	4,121
Butternut.....	2,639	1,028	1,260
Tamarac.....	51,975	7,409	19,113
Birch & Maple.....	269.661	138,803	201,289
Masts & Bowsprits...	33pcs	—pcs	—pcs
Spars.....	51 pcs	— pcs	41 pcs
Std. Staves.....	368,1.1.27	677.3 0 15	93.6.1.12
W. I. Staves.....	1171.0.1.07	619,2.3.20	260.3.0.19
Brl. Staves.....	75.4.3.23	115.3.0.16	9.7.1.0

JAMES PATTON,
Quebec, Nov. 7. Supervisor of Cullers.

THE IMPORTANCE OF A SUPPLY OF WOOD.

No one who is at all familiar with forests and their products, needs to be reminded of the importance of having at hand an abundance of wood of various kinds, or how much it contributes to the general welfare and happiness of a nation. But there are those who have not paid much attention to this subject who claim, and no doubt honestly believe, that the great progress made of late years in the use of iron in the place of wood in building houses, bridges, piers, ships and other structures, are but indications of what is to follow and that in few years there will be no great demand for wood.

The building of railroads which reach almost every part of the country has aided in the distribution of coal, and made this in a great measure a more convenient and in many instances a cheaper fuel than wood, but in building these roads a vast quantity of wood has been used, and of the best kinds, not only for ties, of which nearly or quite three thousand are put down per mile, but on many of the roads wood is still used for fuel. There is now nearly or quite one hundred thousand miles of railroads in the United States, and we have only to multiply this by three thousand to ascertain that three hundred millions of ties have been used in their construction, leaving out of account the thousands of wooden bridges and other structures, in the building of which more or less wood has been consumed. The railroads may have assisted very materially in checking the consumption of wood for fuel, but they have probably more than balanced the account in the amount used in their construction, besides the three hundred million of ties must be duplicated every ten years, for the average life of railroad ties will scarcely exceed a decade, and with nearly all kinds, except the best oak, it is a year or two less.

The demand for railroad ties is not likely to decrease, but increase, although as timber becomes scarce and prices advance, preserving processes will doubtless be employed to prevent rapid decay. Stone, brick and iron will also come into more general use for buildings, but the increase in population will also tend to increase the demand for wood for other purposes besides that of buildings.—*American Agriculturist.*

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, Oct. 28, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., Washington, D. C.:—

307,313.—Barrel former—T. L. Lee, Memphis, Texas.

307,364.—Carpenter's gage—W. Wells, Clevelaud, Ohio.

307,195.—Floor clamp—E. W. Holt, Corrina, Me.

307,332.—Lathe feeding mechanism.—M. Y. Ransom, Cleveland, Ohio.

307,233.—Plane—C. H. Pike, West Troy, N. Y.

307,112.—Saw guard—J. G. Groff, Connersville, Ind.

307,348 & 307,349.—Saw mill carriages, feed mechanism for—J. W. Stokos, Manistt, Mich.

PATENTS ISSUED NOV. 4.

307,380.—Long turner.—R. E. Park, Sherman, N. Y.

307,675.—Lumber measure—E. C. Newton Batavia, Ill.

307,616.—Saw—H. Alley, Clifty, Ind.

307,708.—Saw drag—W. Cole, Menominee, Wis.

307,665.—Saw-hanging—G. A Long, Northfield, Mass.

307,554.—Saw guide—W. Kirby, Byhalia, Miss.

307,608.—Saw mill circular—W. F. Parish, St. Paul, Minn.

307,600 & 307,601.—Sawing machine, circular J. R. Thomas, Cincinnati, Ohio.

A GROWING TRADE.

Canadian trade with the Argentine Republic—which includes that part of South America east of Chili, extending from Bolivia and the Brazils to Cape Horn—is growing. Exports have been made thither this year from Quebec of lumber, wool goods, rope, canned meat and vegetables, to the value of nearly two million dollars. No less than twelve and a quarter million feet of lumber has been shipped by two firms from that port. A quantity of this lumber shipped is on Government account, and will be used in the construction of public buildings in La Plata, the new capital of the Province of Buenos Ayes. The lumber shipped by a single lumber company of Montreal for different firms, largely to Monte Video, amounted, we are informed, to something over twenty-one million feet.—*Ex.*

• • • • Pile tumors, rapture and fistulas radically cured by improved methods. Book two letter stamps. World's Dispensary Medical Association, Buffalo, N. Y.

Catarrh—A New Treatment.

Perhaps the most extraordinary success that has been achieved in modern science has been attained by the Dixon treatment for Catarrh. Out of 2,000 patients treated during the past six months, fully ninety per cent. have been cured of this stubborn malady. This is none the less startling when it is remembered that not five per cent. of the patients presenting themselves to the regular practitioner are benefitted, while the patent medicines and other advertised cures never record a cure at all. Starting with the claim now generally believed by the most scientific men that the disease is due to the presence of living parasites in the tissues, Mr. Dixon at once adapted his cure to their extermination; this accomplished the Catarrh is practically cured, and the permanency is unquestioned, as cures effected by him four years ago are cures still. No one else has ever attempted to cure Catarrh in this manner, and no other treatment has ever cured Catarrh. The application of the remedy is simple and can be done at home, and the present season of the year is the most favorable for a speedy and permanent cure, the majority of cases being cured at one treatment. Sufferers should correspond with Messrs. A. H. DIXON & SON, 305 King street west, Toronto, Canada, and enclose a stamp for their treatise on Catarrh.—*Montreal Star.* 1y132.

The William Hamilton Manufacturing Co'y

(LIMITED,)

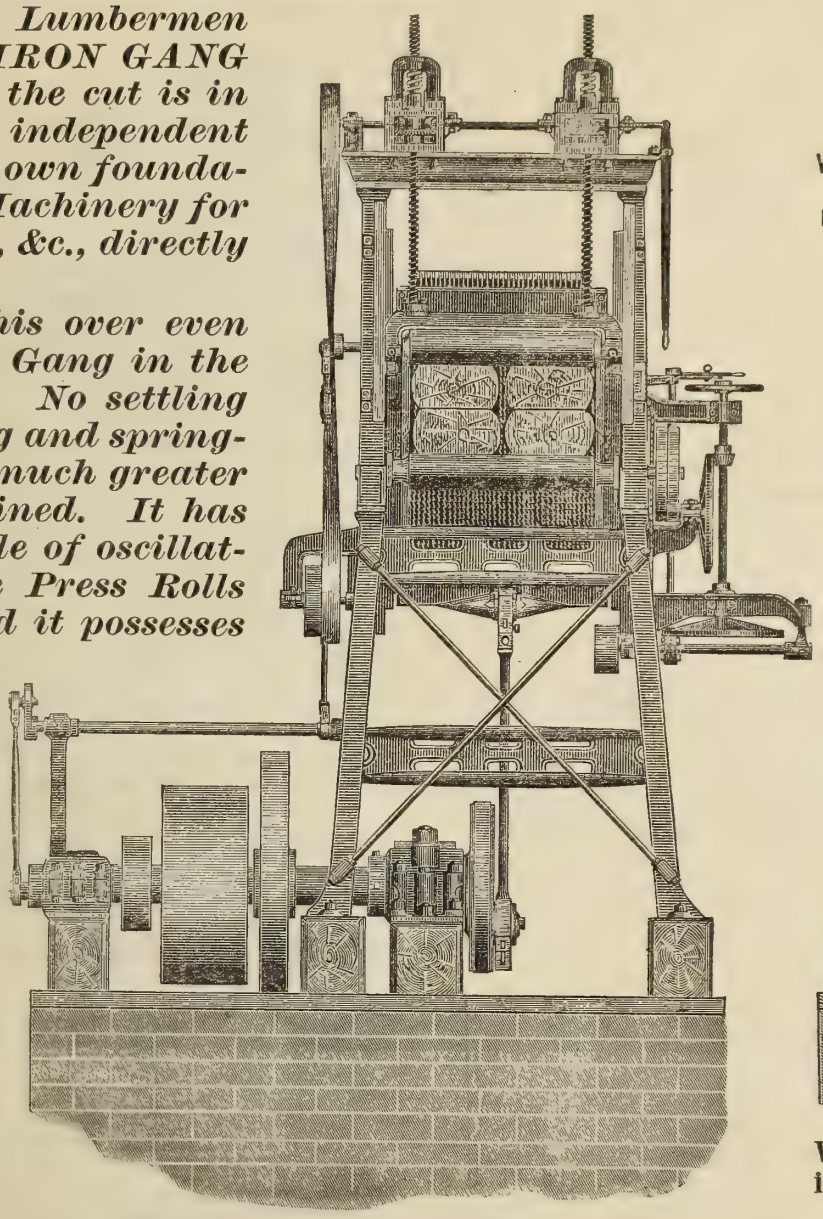
MANUFACTURERS OF

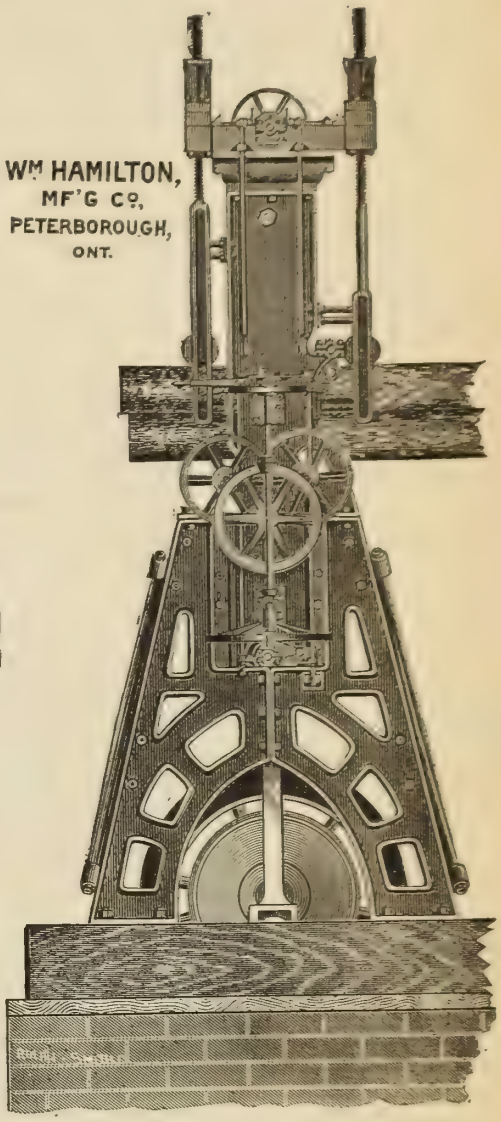
Saw Mills and General Machinery

PETERBOROUGH, - ONTARIO.

We introduce to the Lumbermen of Canada, our New IRON GANG which will be seen by the cut is in itself a complete and independent Machine, resting on its own foundations, having all the Machinery for operating, feeding, &c., &c., directly attached.

The advantage of this over even a well built ordinary Gang in the mill frame is evident. No settling out of line, no yielding and springing of timber, while a much greater working speed is obtained. It has the most improved style of oscillating motion, it has the Press Rolls operated by power, and it possesses generally all the good features of best American Gangs, with heavier frame work, and heavier shafting, all with a view to rapid, steady & correct working. A good look at one of these massive machines satisfies the sawmill man that they are in every way capable of continuously performing heavy duty throughout the season.





We make these GANGS one of our Specialties, and manufacture different sizes.

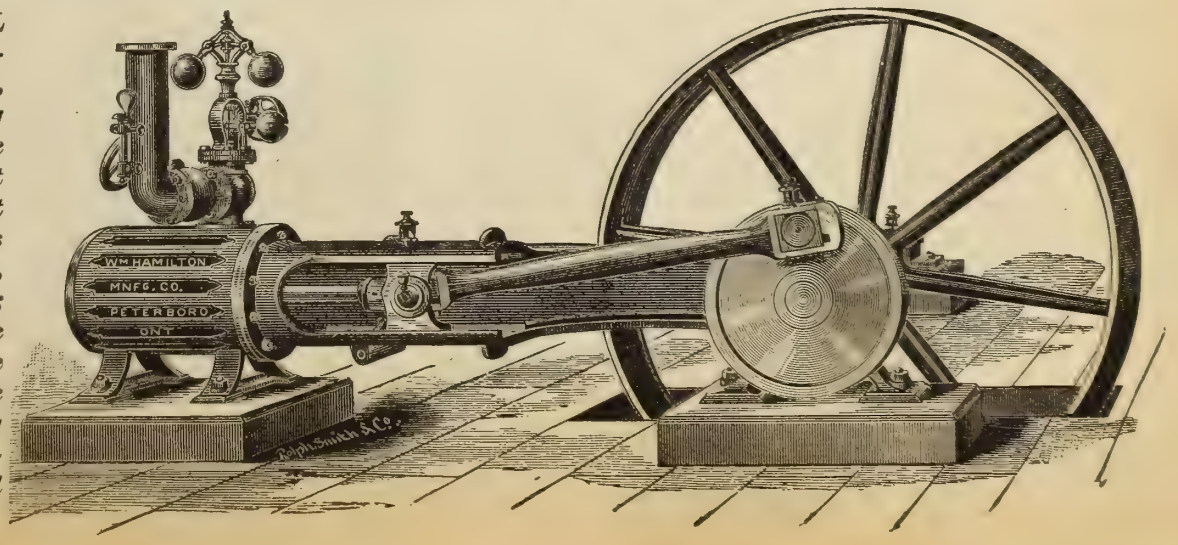
The Wm. Hamilton Manufacturing Company. Limited, Peterborough,

SERPENT RIVER, September 28, 1884.

GENTS,—We are doing big work with the Mill. We recently cut 122 thousand feet of inch Lumber in one day, with the Gang and Large Circular, without any crowding whatever. We are making a steady average of from 90 to 100 thousandfeet per day. I cannot say what amount the Gang is really capable of cutting, as we have not yet been able to stock it to run it at its full capacity. I can, conscientiously recommend the Gang as the best built in Canada. I remain, yours truly, (Signed) WM. THOMPSON, Mill Manager for COOK BROS.

Also, ENGINES and BOILERS.

This cut represents our SAW MILL ENGINE, of which we make the following our Standard sizes, 12x16, 16x20, 18x24, 20x24, and 24x30, built Strong and Substantial for Heavy Work. The Piston Rod, Cross-head Pin, and Wrist Pin, are made heavy and of the best steel; the Connecting Rod has solid ends and is tightened up by screw and wedge, avoiding all danger of keys getting out; the Slide Valve has a simple balance valve, requiring no attention from the Engineer, as it is self-adjusting. The Engine Shaft and Fly Wheel made very heavy. Belt Pulleys put on when required in place of Fly Wheel, and all regulated by the Judson Governor.



LIFE OF THE LOGGERS OF NEW HAMPSHIRE.

A letter from Portmouth, New Hampshire, gives a very interesting pen-picture of the rural life of the loggers of that State, where the lumber interest is a large one, but one of which few people in this section have any adequate idea. Away up in the Pemigewasset Valley, among the foothills of the Fraconia range, stand immense forests into which each winter enter gangs of lumbermen. A rude shanty is erected in which the men eat and bunk, and large quantities of salt pork and salt beef, flour and molasses carted in, a cook procured, and the winter campaign opened. The life of the men in these camps is a most monotonous one, chopping steadily through the day, with the exception of a short rest for dinner and a smoke. After supper, all gather about the cook's fire to tell stories or to listen to the soulful harmony drawn from a $2.50 fiddle, and then they climb the ladder to their bunks in the loft.

The typical river driver is to New Hampshire what the cowboy is to the West—a creature of unbounded profanity and shirt collar, bold, reckless and dare-devil to the last degree. Yet among the number are many who are far above the average of such laborers—farmers' sons, who go down the river for the sake of the $1 or $2 per day, which is more than they can earn at home at this season of the year. The life is a hard one. The men never sleep in a house during the trip, but two camps, the "front" and "rear," move with the drive, here to-day and further on to-morrow.

The camp consists of a large cook's tent and several "A" tents, in which, on a few inches of straw, the men take their rest. At daylight the men are called to breakfast, after which they go immediately to the river. In the middle of the forenoon a lunch is carried them, and another at 4 p. m. Supper follows at dark, previous to "turning in." The bill of fare is not extensive, but is one well adapted to the mode of life. Coffee, fried pork, boiled corn beef, gingerbread and biscuit, cooked in the old fashioned tin ovens before an open fire, and baked beans, cooked in the ground, are the usual dishes. Good cooks are always employed, and the men are never stinted. An immense wagon follows the drive, always filled and covered with a hetergeneous collection of pike poles and overcoats, tents, coffee-pots, etc. The trip usually consumes from two to three months. The drivers, cooks, waiters, etc., comprise a force of about 60 men.—*Ex.*

HARD WOOD FLOORING.

A Boston paper says: For about three years past there has been a growing demand for birch, beech, and maple lumber for factory flooring instead of pitch, or Southern pine, formerly in use. There is not a very fair demand for birch, beech, and maple lumber, and a number of mills have used it in preference to Southern pine. This lumber is claimed to be more durable than Southern pine and will not sliver as that wood does when worn. It is also cheaper. A lot of floor boards of these hard woods, dressed and kiln dried, can be delivered at $28 per thousand feet, while Southern pine flooring would cost from $33 to $34.

A considerable demand for this hard wood lumber for flooring in roller skating rinks has also sprung up within the last two or three years. These rinks have become very popular, and there is hardly a New York or England town of importance which has not one or soon will have. As the wear on the floors is very great only the best lumber is used. The boards for this purpose are carefully selected and will command from $40 to $45. They are from 2½ to 4 inches in width, while the boards for mill flooring are from 2½ to 5½ inches wide. With the use of this flooring in skating rinks there has also arisen a considerable demand for it in dining rooms and hall-ways, where it has to a great extent displaced the ash, chestnut and walnut, being from one-quarter to one-half less in price, and, it is claimed, being fully as durable. It is being used somewhat also in public buildings.

This hardwood lumber is obtained mainly from New Hamshire, where there are large forests of these woods. There is considerable obtained in Vermont. Up to its use for flooring this class of timber was held to be of very little value, and its main use was in the manufacture of clothes pins, pails, hay rakes, and a number of such miscellaneous articles. The timber lands on which it grew were valued mainly for their spruce and hemlock. The growing demand for hardwoods, however, has caused a considerable increase in the value of such lands. About all the mills that now have suitable facilities for the sawing, dressing, and kiln-drying of this lumber, while up to a few years ago very few of them touched it.

PECULIAR RESULT OF A MILL ACCIDENT.

The Duluth *Tribune* makes the following statement: "It was more than three weeks ago that John Johnson, a laborer in the Duluth Lumber Company's mill, was injured by being struck in the head by a stick flying from a saw. The stick broke the skull just over the right eye brow, and when Dr. Davis dressed the wound he took out a piece of skull about an inch and a half large, exposing the brain. For some time Johnston's recovery was very doubtful, but he improved, and is now doing well. The peculiarity of the case lies in the fact the wound has not entirely healed yot, and that it appears as though it would not heal; for the wound reached the nasal cavity, and now the patient actually breathes through that hole in his skull—that is, he can breathe so when he chooses to. He is now doing well, and promises to fully recover, except that he will always have the choice of breathing through his nose, his mouth, or the hole in his forehead."

FOREST POLICE IN GERMANY.

In Germany the woods have their police, whose duty it is to see that no devastation is wrought by inconsiderate owners. No man may cut down his trees without the sanction of these authorities. The reason is that wood is the staple fuel of the country, and if the Government did not step in to protect the people against their own improvidence, the peasants would speedily sweep away all their forests to enable them to clear the mortgages which the Jews hold on their lands. In Bavaria the price of fuel rose, between 1830 and 1860, as much as 60 per cent., and building timber rose 70 per cent. In the sixteenth century the forests had dwindled so much, and the cost of firing had risen so high, that the princes took the forests under their sovereign protection, and appointed a class of officials whose duty it was to see after the fuel supply in their provinces, and look to the protection of trees just as the police have to see to the protection of citizens. One result has been that no trees are allowed to grow longer than when they have reached maturity. After they have attained a certain age their rate of growth is so slow that their room is need for younger plants and they are cut down. Thus a pine reaches perfection about its thirtieth year, and goes back after its eightieth. As a rule, a forest is cleared and replanted every thirty years, and it is an exception anywhere to see an older pine or beach. But the Bohmer wald has not been subject this policement, and there do remain in it magnificent pines several hundred years old.—*Cornhill Magazine*

GEAR WHEELS AND BELTING.

Gear wheels have one advantage over belting—that is, their action is positive. If one of the shaft with which they are to connect makes a given number of turns, it is known to a certainty how many turns the driven shaft has made. With belting, however, nothing positive is to be found in their action; it is likely to slip, and, if the belt is very elastic, will need a difference in the diameter of the pulleys to keep up the speed of the shafting. A queer case of this kind came to our notice some time ago. It was in a grist mill, and the owner found it necessary in time of low water to connect the two separate line shafts, leading each from a waterwheel by a cross shaft, from one to the other, so to give him the power of both wheels on either shaft. This cross shaft was connected with beveled gears, and, to make it doubly secure, pulleys of equal size were placed on these parallel shafts and connected by a cross belt that was very elastic. After this arrangement had been in use for some time, it was noticed that the tension of one fold was nearly as great as that of the other, and that the belt was doing very little work. The beveled gears had all of the load to carry, and the belt was acting as a sort of brake on both wheels, and in order to bring the belt up to the condition that it would convey its part of the load, the driving wheel required to be lagged up with a thickness of double belting, just to keep the speed of both wheels equal. In transmitting power with belts, one of the wheels roll on the slack fold, while the other runs on the stretch that is transmitting the load, and if the belt is very elastic, one wheel will have farther to roll than the other for every turn of the belt, and to bring the speed of a shaft similar to that obtained by gear wheels, each driving pulley must be wakened up a little in its driving capacity. There are millwrights who claim that it is impossible for gear wheels to work in connection with belting in conveying power from one shaft to another, on account of the elasticity of the belting, when it is owing to this very elasticity that their working in partnership can be successfully accomplished. A slight difference in the ratio required for gear wheels will be taken up in the stretching and slipping action of the belt, and keep a difference in the tension on the driving fold from the returning side of the belt, a condition that must be found in every method of belting if it is to have anything to do with the transmission of power. When a pulley can be lagged up till the driven shaft is making the same number of turns as the one driven with the train of gears, there should be no reason for connecting them as long as either method is to have no more than its share of the work to perform.—*Boston Journal of Commerce.*

THE DRIVING CAPACITY OF BELTS.

It has been observed by those who have been investigating the driving capacity of belts, that the tendency with which the pulleys are driven before the belts begin to slip, depends as much upon the adhesion of the belt to the pulley as upon the friction which exists between their working surfaces. In some cases the friction is overbalanced by the tendency of the belt to cling to the pulley, for they may be seen where the surface has been left smooth by the lathemen, and contrary to expectation have a greater driving capacity than when left rough in finishing, a result that would be obtained if friction alone were to be the only resistence that exists in the slipping action of a belt. This is not only the reason why there is nearly thirty per cent. gained in the driving capacity when the grain or smooth side of a belt is brought in contact with the pulleys, but a larger amount of surface in actual contact with the driven surface of the wheel. When the flesh or rough side is used, it is claimed by these observers that a large quantity of air is entrapped in the pores and crevices of the belt when driven at a rapid speed, and when brought between these frictional surfaces must necessarily support a portion of the strain on which the driving friction depends. Although the amount of surface of contact has but little to do with the frictional part of the operation, the driving force depends entirely upon the force with which these sliding surfaces are held together, and whatever is brought to bear upon a film of air that must offer a very little resistance to the action of sliding must be taken from the surface in contact that would not be affected with the smooth sides wrought together for the working surface. Everything that interferes with the actual contact, or assists the sliding action of these particles that are to slide on each other by intercepting a film of some lubricating matter, whether it be solid liquid or gasses, must lessen the driving capacity and the load which the belt is capable of carrying.—*Boston Journal of Commerce.*

ALL MADE FROM SMOKE.

The old saying that nothing is wasted or lost in nature is true in regard to the smoke from the furnace of Elk Rapids, Mich. In this furnace are manufactured fifty tons of charcoal per day. There are twenty-five charcoal pits constructed of brick. Each pit is filled with 100 cords of hardwood and then fired. The vast amount of smoke from these pits, which was formerly lost in the air, is now utilized. Works have been erected to convert the smoke into chemicals and acids.

These works are a curosity. First, they have a circular tube, made of wood, with pine staves, sixteen feet in length, bound together with heavy iron hoops. This tube is placed directly over the pits in a horizontal position, with an opening from each pit into the tube. At the end nearest the building there is a large drum containing a rotary fan, propelled by machinery, the power of which is gas. That acts as a suction or draft for the smoke, which is conveyed into fire stills filled with copper pipe, two and one-half inches in diameter. The boxes in which the pipes are situated are twenty feet square, eight feet deep, made of heavy pine and filled with cold water; they are all connected with copper pipes; they are connected with the main still, 100 feet in length, ten feet wide and eight feet deep, filled with copper pipes, two and one-half inches in diameter, in horizontal position, surrounded by cold water; from this conveyed to a purifier, from which runs what is called pyroligneous acid which is as clear as amber, with an unpleasant odor.

From the acid is produced, first, acetate of lime; second, alcohol; third, tar; fourth, gas, which is consumed under the boilers. Each cord of wood contains 28,000 cubic feet of smoke; 2,800,000 feet of smoke handled every 24 hours, producing 12,000 pounds of acetate of lime, 200 gallons of alcohol and 25 pounds of tar. These products have a commercial value in the manufacture of various articles. The smoke from 40,000 cords of wood consumed per annum is thus made a source of much profit, as the works are automatic, and require no workmen to work them.—*Boston Journal of Commerce.*

CHEAP WORK DON'T PAY.

Those who engage in the construction of machinery should never allow a poorly executed article to pass out of their hands, if they desire to establish a permanent business. Many persons commit the egregious mistake of supposing that, if they only make articles or machines cheaper than other parties, and sell them at lower prices—even if the workmanship is of inferior quality—they will be sure to get a large patronage and obtain a permanent custom. They may make large sales for a short period of time, but in the long run they will not obtain a good, fixed custom. Not many years ago a company with a large capital commenced the manufacture of a certain line of goods on a great scale, in one of our eastern towns; the principal manager conducted the business upon the wrong principle of making cheap and showy articles, irrespective of their quality. In about two years after they had commenced operations, the company was insolvent, and the stockholders lost nearly all their investments. Not many miles from the same place, a few practical mechanics commenced business in the same line and about the same time, with a very small capital; these men instead of going down, have been going up ever since; and to day they are doing a large, profitable and permanent trade. These mechanics began business with the resolve and the knowledge to do first class work, and they have therefore succeeded.—*American Wood-Worker.*

L. S. Baker, of Big Rapids, Mich., has purchased all the property of the West Troy Lumber Company, including mills, pine lands, logs, and about 8,000,000 feet of lumber; also the village of West Troy and the entire lumber and logging outfit. The original cost of the mills is stated to have been $120,000.

J. H. Hill & Sons, of Saginaw, Mich., will put in but 8,000,000 feet of logs this winter in the place of 32,000,000 feet last year, and 46,000,000 feet the year before.

"I do not like thee, Dr. Fell,
The reason why, I cannot tell"

It has often been wondered at, the bad odor this oft-quoted doctor was in. 'Twas probably because he, being one of the old-school doctors, made up pills as large as bullets, which nothing but an ostrich could bolt without nausea. Hence the dislike. Dr. R. V. Pierce's Pleasant Purgative Pellets are sugar-coated and no larger than bird-shot, and are quick to do their work. For all derangements of the liver bowls and stomthey are specific

A BIG STICK.

A correspondent writing from Mt. Sterling, Ala., to the Brewton *Banner*, says: I read, a few days since in the *Star* (copied from an exchange) of a large stick of timber manufactured by the Etheridge Bros., and delivered to the Mobile market. It was got out octagonal and is a large piece of timber, but I hauled a piece for Gaines & Slater at Tusahoma in Choctaw county last week that was 45 inches in the centre of the log, 86 feet long. These parties were young in the business and made this piecc square edged and by the two-thirds rule measured 30 inches; it had four straight lines, nicely squared and worked; it had but one knot which was sound and only measured one inch in diameter. Now, if this stick had have been got out in ocotagonal shape it would have measured 40 inches in diameter. It was the finest piece of timber I ever saw, perfectly sound, straight, and of good heart, it would take the premium at the World's Exposition at New Orleans if exhibited. I would not be afraid to risk $100 that it will be the finest piece of wood that ever went to the Mobile market, or perhaps to any other market in the United States.

STRAIN ON BAND SAW BLADES.

A well-known band saw manufacturer of Rochester, N. Y., Mr. F. H. Clement, writes as follows to the *American Journal of Appliances*: I have made some experiments on the strain of band saw blades, and while I do not consider that they are exhaustive, I think they pretty nearly represent the average practice. Of course there is a wide difference in the ideas of operators about the necessary amount of tension on the blade, and my figures are based on my own judgment. The strain was weighed on an ordinary platform scale, by means of a lever and suitable fulcrums. For a 3-16-inch blade, No. 21 gauge, running 3,500 to 4,000 feet per minute in ordinary sawing, the strain was 151 pounds. For ½-inch blade, No. 21 gauge, same conditions, 214 pounds. For 1-inch blade, No. 20 gauge, same conditions, 358 pounds. These figures are the actual tension on the blade, the weight of the wheel and its bearing and the friction on the ways being first deducted. On a heavier machine of my make for splitting or re-sawing, a 2½ blade No. 20 gauge, running 5,500 feet per minute, cutting 19 inches wide, has usually from 1,100 pound, to 1,300 pound tension including the weight of wheel and bearing and the friction on the ways.

HOW TO SAW LOGS.

The springing and warping of timber and lumber are said to be greatly, if not entirely, due to sawing done at the mill in which the work is done by commencing at one side of the log and working towards the other. To avoid the evil it is only necessary to saw off a slab or plank alternately from each side. If this is so, it would seem to be an easy matter and should be done. By a little management, measurements and calculations made with reference to the principal end of each log the sawed pieces might be turned out so as to be precisely symmetrical with respect to the axis of the rough log. For instance saw off the first slab, then turn and remove the next of exactly the same size the two slabs being remainders after laying out the desired thickness on the butt end from the centre, making due allowance for the kerf or cut of the saw. If there is anything in all this it is worthy the attention of architects, builders, and lumbermen.—*Builders and Manufacturers' Journal.*

THE loss to growing timber, fencing and cordwood, caused by the forest fires, which for two weeks raged along both sides of the Chesapeake bay in Maryland and Virginia, is estimated at $100,000. Rains extinguished the flames on October 23rd, after burning over 5,000 acres of land.

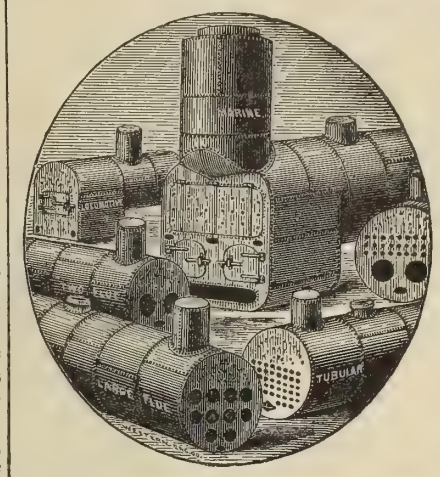
French Grape Brandy, distilled Extract of Water Pepper or Smart-Weed, Jamaica Ginger and Campbor Water, as combined in Dr. Pierce's compound Extract of Smart-Weed, is the best possible remedy for colic, cholera morbus, diarrhœa, dysentery or bloody flux; also, to break up colds, fevers, and inflammatoy attacks. 50 cts. Keep it on hand. Good for man or beast

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain and cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup for children teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentery and diarrhœa, regulates the stomach and bowels, cures wind, colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for children teething is pleasant to the taste, and is the perscription of one of the oldest and best female nurses and physicians in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

JOHN McGREGOR & SONS

Manufacturers of all kinds of STATIONARY, MARINE and LOCOMOTIVE



BOILERS

And SHEET IRON WORK.

SECOND-HAND MACHINERY Bought, Sold or taken in exchange for new work. ☞REPAIRS PROMPTLY ATTENDED TO. All Boilers Tested by cold water pressure to 150 pounds to the square inch.

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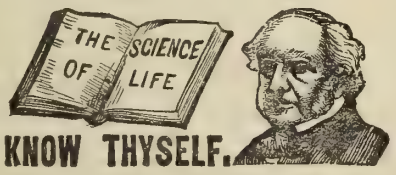
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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & CO., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., NOV. 15, 1884.

GUM, for paving blocks, is being tried on a boulevard in St. Louis.

SPRUCE is cut on the Upper Penobscot, Me., and shipped to Boston for making pulp.

CHANDLER BROTHERS are about starting up a new mill in Letter E township, Franklyn county, Me.

THE Ontario Car Works, at London, Ont., are building 125 box cars for the Northern & Northwestern Railway.

F. W. AYER & Co., of Bangor, have about 5,000,000 feet of spruce deals piled at Buckport, Me., for winter shipment.

A STEAM mill is being built at Washington, Knox county, Me., near the Medomack river, by the Sedelinger Brothers, and another party of Waldoboro.

THE shipyards of the United States employ 22,000 men, and the capital employed therein is $22,000,000. The products of these yards cost over $40,000,000.

AN increase of nearly 3,000,000 feet in the output of hemlock logs will be made in the different townships on the Narragaugus river, Me., the coming winter, on account of a new tannery in the vicinity.

CONTRACTS have been let for 80,000 ties to be delivered on the banks of the Yakima, W. T. The price paid is 15 cents each. The track of the Yakima branch of the Norther Pacific will be laid into Yakima City by December next.

IN Beaudry, Champaign & Co.'s mill, at North Muskegon, Mich., Jans Olson was killed in a strange manner. He was engaged in cleaning away the refuse in the bottom of the mill, immediately under the circular arbor, when it burst into 50 pieces, one of them striking Olson's head and chipping out a portion of the skull. His death was instantaneous.

BY a fire at Midland on Nov. 10th the British Canadian Lumber Company lost $2,000.

AN incendiary fire at Duluth, on Nov. 10th, destroyed the Onota Lumber Company's saw mill, Osterhout & Hughart's saw mill, fifteen million feet of lumber, four dwelling houses, a store and other buildings. Loss, $200,000.

AT a sale of timber licences in Fredericton, N. B., on the 30th ultimo, the bidding was lively. A block of limits in Cardwell parish, Kings County, was bid up to $117 per mile and secured by T. P. O'Connor. Another of two miles on Pishehogan River, Charlotte County, was secured by Jas. Pickard at $26 a mile.

THE Big Rapids Wooden Ware Company, of Big Rapids, Mich., has contracted the coming year's product at satisfactory prices, and has called a meeting of the stockholders to increase its capital stock. It is cheerful to know, says the *Northwestern Lumberman*, that one manufacturing firm is prosperous, anyway.

A SUBMERGED forest has been discovered off the coast of Graham island, Queen Charlotte sound, B. C. Fifty or 75 acres of it are exposed. Stumps of trees are seen, some standing erect, others lying down. Many are petrified, and others have been transformed into lignite coal. Some of the stumps are large.

TWELVE men in Wright & Ketcham's camp, No. 5, Midland county, Mich., were simultaneously attacked with severe sickness after partaking of their supper. One symptom was weakness in the legs and arms. A physician brought them out all right, and the trouble was attributed to something wrong in the beef.

THE way wood is worked up in Maine is illustrated by the fact that one firm, J. W. Porter & Son, of Strong, manufacture chair seats, staves, croquet sets, cloths pins, excelsior and ten pins. These products are marketed in Baltimore, Boston, Chicago, Cincinnati, New York—in fact in all the large cities of the country.

WE begin to hear, says the *Lumberman's Gazette*, of small lots of lumber being bought to hold over. One commission man last week sold 1,500,000 feet to be delivered next spring. Still present indications are that comparatively speaking the amount of lumber on the docks sold at the close of navigation will be very small.

LEATHER belts sold by Messrs. F. E. Dixon & Co., Toronto, are made by them from only the solid parts of No. 1 steer hides. The shoulders and soft parts being all trimmed off and do not enter into the manufacture of belting at all. A feature of this firms belting is the patent lap joint fastening, which entirely does away with the points of the splices getting turned up after having been run a short time, as is the case with some other belts.

THE NEW ORLEANS EXPOSITION.

A Quebec despatch, dated the 4th inst., says: The Government Council of Arts and Manufactures of the Province of Quebec met here today at the departmental buildings. There were present a large number of Montreal merchants and manufacturers, besides representatives from other leading cities of the Dominion. Commissioner-General Morehead addressed the association, by invitation, on the subject of the "World's Exposition of New Orleans," which proved very interesting and instructive to members of the association, to which the president of the association and other members made replies, after which a resolution was unanimously passed to send a deputation to Ottawa to request the Dominion Government to make an exhibit at New Orleans upon the same scale as that of the Paris exposition, and also requesting the Government to grant free transportation on the Government steamer Newfield to individual exhibitors, thus transporting all exhibits by sea.

Throat and Lung Diseases

a specialty. Send two letter stamps for a large treatis giving self-treatment. Address World's Dispensary Medical Association, Buffalo, N. Y

THE STATE OF TRADE.

THIS season has not been a very prosperous one for dealers in lumber. The American market has been overstocked, and in the English market prices have been depressed by a similar cause. Prices have, therefore, not been high.

The prospects for the logging are, from one point of view, not very bright. From all points come reports of the curtailment of the output this season, and if these reports are correct, and we see no reason to doubt them, the amount of cutting done in the woods this season will be below the average. This, of course, means that the same amount of capital will not be diverted into this channel this season, and lumbermen will not do as large a business and therefore will not have so large returns as if more capital had been employed, always providing ready markets could be found for the increased product. For the men it means that fewer laborers will be required, and consequently that wages will not be very high.

But there is another view of the situation which shows the silver lining in the cloud. The principal cause, as we have said, of the depression in prices in chief markets has been the surplus of the supply over the amount required for consumption. The remedy for this state of affairs is a curtailment of the supply, and the proper and most effective way to limit the supply is to go to the root of the matter and reduce the amount of work in the woods. The small amount of work in the woods reported is a consequence of a depressed market, and, if the curtailment is sufficient, the result will be a better demand, more active markets and better prices next year. The gloomy prospects for the season in the woods is a foundation for a better state of trade next year.

The Presidental election in the United States has been a disturbing element in the trade of that country, but the election is now over, and soon, it may reasonably be hoped, the effects of the agitation will no longer be felt, and the revival from the more active resumption of business neglected through this cause will assist in giving an impetus to trade.

Stocks in many places are reported to be lighter than they were at this season last year, and this, with the expected curtailment of the cut, we should think gives sufficient reason to hope for better things next year.

EXHIBITIONS.

THAT good results would accrue to those countries which manufacture any special article, or carry on an especial trade, by exhibiting specimens of their manufactures and articles of export at an exhibition at a distant or foreign country, is reasonable. The Forestry Exhibition at Edinburgh was a good opportunity for this country to make an exhibit that would give a country, already a large customer, a better idea of what it was capable of, but, unfortunately, only one Province had a display there. This one Province was New Brunswick, which appears to have been the only one that appreciated the importance of the exhibition and was the sole one that was directly represented. The joint exhibit of New Brunswick and the Land & Lumber Company, at Edinburgh, has already produced good results, as it is said that orders have been received for classes of wood that have hitherto not been exported. From England an order has lately been sent for wood for light boxes, and from Paris for a veneering wood to resemble Hungarian ash. These orders have been filled, and a trade of considerable proportions will probably be established by this means. This is said to be a result of the exhibit at the Edinburgh Exhibition and it shows the importance of paying attention to these shows. It pays for a country not to neglect them.

In this connection we might call attention to the World's Exposition to be held in New Orleans from December 1st, 1884, to May 15th, 1885.

A movement is on foot to hold a World's Exhibition in Montreal in 1886, and the proposal should meet with encouragement.

WHAT is described as the first direct charter of a lumber vessel from St. John to Pernambuco direct, was made last week, when the tern schooner Busiris was chartered to load lumber for Pernambuco at $13 per M.

LIVERPOOL.

The *Timber Trades Journal* of Nov. 1st, says:—Only a few vessels continue to arrive with cargoes of timber and deals, and this tends to maintain a healthy condition of trade. From various parts of the country we hear reports couched in language less desponding than we have been accustomed to for such a prolonged period. There is evidently a fair volume of business being done, and a better feeling is evident, but not to such a degree as to effect prices, yet it is pleasant to have this to record after such a lengthened time of depression. The time of the closing of the Canadian season is drawing nigh, and this fall's import is likely to be one of the smallest we have experienced for many years. Advices from Quebec speak of the increased scarcity of waney board pine, and of its advance in cost there, so there is but little chance of present stocks being increased to any appreciable extent.

GLASGOW.

The *Timber Trades Journal* of Nov. 1st says: Arrivals at Clyde ports still continue moderate. The list for the past week includes three cargoes of Quebec timber and a cargo of teak, all at Greenock, and the Glasgow arrivals have been chiefly in parcels of various wood goods per steam liners. This year the total import of wood to Clyde ports up to date is about 30 per cent. under that of last year at corresponding date; and comparing the consumption with last year's it becomes evident that the import should continue on the same restricted scale. Of yellow pine logs, for instance, the consumption last quarter (ending 30th September) was 8,620 logs (square and waney), as compared with 12,890 logs in 1883, and of pitch pine, hewn and sawn, for same period, 10,000 logs (1884) and 14,000 logs (1883).

There is little change to note in the market so far as prices are concerned. Since last writing no public sale has been held, and apparently the demand does not keep pace with supplies limited as they are at present. But imports from Canada are now drawing to a close, and the probable quantity of goods to arrive during the remainder of this fall season is well known to be much less than usual, while the cost of wood from abroad to arrive after this date will likely be increased by extra insurance charges. As regards deals, there appears to be an oversupply of the lower grades, but 1st quality pine of good breadths are wanted.

TYNE.

Another week of very small arrivals, says the *Timber Trades Journal* of Nov. 1st, has again to be reported, amongst them being only two entire cargoes of sawn timber, the remainder being made up by one cargo of staves, one of Quebec timber, some steamers from Gothenburg, and some parcels of pit-props and mining timber.

Favored by the extremely fine weather building operations are being fairly pushed forward, and altogether the amount of timber being used is not large, yet with small importations stocks are being fairly reduced.

The general state of trade shows no improvement in any department, and the prospects for remainder of the year are certainly not brilliant.

THE timber carrying trade on the lakes the past season has been very dull as compared with last year.

You Can't Make $500 by Reading This, even if you have chronic nasal catarrh in its worst stages, for although this amount of reward has for many years been offered by the proprietors of Dr. Sage's Catarrh Remedy, for any case of catarrh they cannot cure, yet notwithstanding that thousands use the Remedy they are seldom called upon to pay the reward, and when they have been so called upon they have universally found that the failure to cure was wholly due to some overlooked complication, usually easily removed by a slight modification of the treatment. Therefore, if this should meet the eye of anybody who has made faithful trial of this great and world-famed Remedy without receiving a perfect and permanent cure therefrom, that person will do well to either call upon or write to the proprietors, the World's Dispensary Medical Association, of Buffalo, N. Y., giving all the particulars and symptoms in the case. By return mail they will get good advice free of all costs.

INTERESTING RELICS.

Mr. Thomas Bates, a Government official in Montreal, is the fortunate possessor of a unique relic of the birth of Canadian journalism, which demonstrates what an insignificant origin it had; as compared with the vast development of the press throughout the Dominion in the present era it is like a tiny acorn groming into a forest of stately oaks. The memento, to which your correspondent's attention was called by an Episcopal clergyman whose taste are decidedly for the antique, is a copy of the first newspaper published in this Canada of ours, entitled the *Quebec Gazette*, which made its appearance on the 4th of May, 1794. It is in a state of excellent preservation, and measures about twelve inches long by six inches broad, one half being printed in English and the other half in French. The first page contains a salutation to the public, claiming support for the enterprise. Its old world news was dated three months before publication, so that it must have been an arduous undertaking to cross the Atlantic at that time. Part of the English news was to the effect that the British Government had resolved to impose a duty on tea entering the ports of the eastern colonies of British America. The resolution must have remained in abeyance for fourteen years, as it was not carried into effect until 1776 when the colonies revolted. There is only one solitary advertisement in the publication. The copy which Mr. Bates prizes so highly was found in a box in an old warehouse belonging to an importing firm here, and had evidently came out from England packed around some kind of goods. The present owner has had several liberal offers for this first specimen of a Canadian journal, but he rates it at the sum of twelve hundred and fifty dollars, which of course it far beyond the mark. Another antique find has also been made of two hundred engravings of large size, executed in London, England, about half a century ago as, illustrative of Hawkin's History of the city of Quebec, published at that time. The picture, which is very finely executed, represents the old city, with views of the gallant Wolfe's military exploits in the foreground. The original price of the engraving was over five dollars, twenty-one shillings, but those lately discovered are selling rapidly here at two dollars and a half each.—*Mail.*

IRON AS A PRECIOUS METAL.

Iron and copper were the only metals known to the natives before the arrival of the Europeans, and they were both called in the Herero language by the same name. The civilized Hereros now use foreign words for copper, silver, and gold, while lead was received its name from the bullets into which it was cast. The pastorial tribes of the Hereros and Ovambandierus have but few smiths of there own, but are served by itinerant smiths from other tribes, who wander around, working in small companies, among the chiefs, till they have earned enough cattle to ustify them in returning to their homes. Some times they are political refugees, who have excited the anger or jealousy of their chiefs in Ovamboland, and are compelled to turn their backs upon their homes till a change of dynasty takes place. These Ovambo smiths brought iron from their native country, where the art of extracting that metal and copper from the ores is understood, and rich ores are found. Iron could formely be got in Ovamboland only at the cost of great labour, and the smith had then to carry his store on his back some fifteen or twenty days' journey, The metal, therefore, commanded a very high price. As late as 1840 a simple bracelet of iron wire was an adequate guest's present, and a large fat wether could easily be bought with a span of the old hoop-iron with which trunks were bound. The natives were greatly astonished at seeing the costly metal wasted by the Europeans in boat-mails. Iron had thus the value of a precious metal, and rusting and changing but little in in the dry climate, was worn inornaments by the Hereros, while other tribes preferred copper and brass. The native smiths now use European iron, and seek out good steel, such as is found in files and bayonets. But iron forged in the old-fashioned way into ornaments and weapons has still considerable value.—*Popular Science Monthly for November.*

RAFTS ARRIVED.

The Quebec *Chronicle* has the following list of rafts arrived :—

Oct. 3.—R. & G. Strickland, waney square white pine, Sillery cove.

McArthur Bros., New London cove.

Bolduc, Collet & Talbot, deals, Grand River.

Oct. 6.—John Bailie, birch, Bailie's wharf.

Oct. 7.—D. D. Calvin, oak and pine, sundry coves.

Robt. Dollars, waney whlte pine, New Liverpool.

E. L. Kelsey, staves, Bowen's (Sillery.)

Thomson Smith, red pine, Woodfield Harbor.

Oct. 9.—Stokes and Kelly, staves, Dobell's (Sillery).

Oct 23.—Cook & Gibbons, ash and elm, St. Michael's cove.

Oct. 30.—J. M. Irvin, white pine, &c., St. Lawrence Docks.

THE WRECKS IN THE GULF.

Quebec, Nov. 11.—The schooner "Emelie," wrecked in the Gulf, had sixteen men on board and was on her way up to Quebec from Perce. Ten men are reported to have been saved through the exertions of Charles and James Jourdain, of Pointe de Monts, who lost all they were worth in the act. These men are on Caribou Island, near Pointe des Mont, and are entirely destitute of provisions. It is not known here whether all the ten on the island have been saved from the schooner, or whether six of the number are the survivors from the wreck of the "Nanna." At all events there are reasons to fear that the loss of life will be from eight to fourteen souls. Fears are also entertained that Victor Fafford, son of the lighthouse keeper at Pointe de Monts, who is missing, has been drowned. Urgent telegrams have been received here, applying for provisions for the destitute. At Pointe de Monts and Trinity Bay adjoining buildings, bridges, vehicles and boats have all been swept away, and fishermen and others reduced to pauperism. The platform was washed away from around the lighthouse and the sea beat into the tower. At Point de Monts it is believed that serious disasters have occurred all along the coast.

PUBLIC WORKS.

Since our last notice of the canal here the contractors have pushed the work and completed the first or entrance lock. It was their intention to raise the wall of the upper lock to such a height that a permanent bridge could be put on but a sudden and unexpected turn in the weather has taken place, and, having no reliable weather prophets to consult, they fear that they will have to close work for the season. The long talked of mill-race has as last been decided upon and we are informed that the rock excavation will be gone on with this fall, and that next summer it will, as proposed, be connected with the canal and made part and parcel of the Government work. In order, however, to cut the mill race, the present temporary bridge will have to be removed, and another one built across the canal facing Colborne street. There is also a stone pier to be built for the swing bridge on the railway line, and the railway authorities intend, we believe, to avail themselves of the opportunity thus afforded to build piers of stone and put on an iron bridge in place of the present wooden structure. The lock which is completed has been admired by all who have visited the Falls, the only fault found, as far has we have heard, being that the wall has not been raised to the height of the rock excavation; but we have no doubt that this rock face will be removed for some distance back, or in some way be made to present a better appearance before the work is handed over to the Government. We are informed that the gates will be built and put in their places as early as possible next season and if the contractors make as good progress as they have made this year, boats will be able to pass through the canal by the fall of 1885. The single lock at Buckhorn has been completed, and Mr. Ross has been engaged with his dredge and scows, to remove the remaining portions of the dam. The gates are not made yet, but stop logs have been placed in position, and it is expected that the coming season will see that part open for navigation. We must now await the next session of Parliament to see whether the other portions of the Trent Valley scheme will be gone on with.—*Fenelon Falls Gazette.*

RUN TO EARTH.

A day or two ago the *Sentinel* contained an article depicting the terrible state of affairs existing at Michipicoten, and how the outlaw Wallace, formely chief of police there, had with three of his companions, taken possession of the steamer Steinhoff and threatened death to all who interfered with them. Mr. Wallace and his friends got down as far as the American Sault on the boat and then they got drunk and commenced relating their outlawish exploits at Michipicoten; whereupon the American authorities arrested them, and passed them across the line. There trial comes off on the 11th, and it is safe to say their reign of terror is over for sevyears. Instead of Winchester rifles and huge revolvers, they will probably, for several years to come, handle the pick and shovel in the Kingston quarries. The whisky traffic is being put down with an iron hand, and since Magistrate Moberly's arrival there no less than nineteen boarding house keepers have come forward and paid fines of $100 each and costs for selling liquor. The newly appointed chief, Joe McKinnon, will, with the assistance of Magistrate Moberly, likely make it warm for law-breakers, and doubtless a better state of things will soon exist at Michipicoten.—*Port Arthur Sentinel, Nov. 6.*

A correspondent writes from Florida to the *Northwestern Lumberman* that Mrs. Harriet Smith, of Tuckertown, Hernando county, is running her own saw mill, managing every department herself, "and," the correspondent adds, "no mill in the country is run better." So far as we know Mrs. Smith is the only saw mill woman in the United States.

An Ottawa despatch of Nov. 8th says :—The square timber outlook in the woods this winter is unfavorable, and other kinds of lumbering promises only slightly better. For the first time in 27 years Mr. Peter McLaren will take out no square timber this winter, having last season's yet unsold in Quebec, with no market offering

Notice to Contractors.

SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Timber," will be received at this office until Monday, the 17th day of November, next, inclusively, for the supply of timber required in connection with the Dredging Plant of the Department, according to a specification to be seen at the Department of Public Works, Ottawa, where printed forms of tender may be seen

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied and signed with their actual signatures.

Each tender must be accompanied by an *accepted* bank cheque, made payable to the order of the Honorable the Minister of Public Works, for the sum of $150, (one hundred and-fifty dollars,) which will be forfeited if the party decline to enter into a contract when called upon to do so, or if he fail to complete the work contracted for. If the tender be not accepted the cheque will be returned.

The Department will not be bound to accept the lowest or any tender.

By order,
F. H. ENNIS,
Secretary.

Department of Public Works, Ottawa, 28th Oct., 1884. 3d108eod1L22

FOR SALE!

Steam Saw Mill,

complete with shingle and planing machines, all in first-class working order, will cut 50,000 feet a day. Engines are large and almost new. Will be sold cheap. For further particulars apply to

Colquhoun, Drummond & Co.

45 Common Street, MONTREAL,

Dealers in new and second-hand Boilers, Engines and machinery.

N. B.—All boilers tested to full Government Test. 1yL16



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ON OLD CATALOGUE PRICES.

Gent's 14k. Gold Watch reduced to $25.

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Gent's Key Wind Jewel, Cut Expansion Balance, in Solid 3oz. Coin Silver Case. Hunting or Open Face reduced to $8.

Gent's Patent Lever, Jewelled, Cut Expansion Balance, Solid Coin Silver Cases, reduced to $7.

Men's size, Heavy, Useful, Cheap Watches, Hunting Case, Key Wind, White Metal Silvered, $4.50; Yellow Metal, Gilded, $4.50.

Nickle, Stem Wind, Open Face, $4.50.

Sent by Mail. Prepaid; Safe Delivery guaranteed.

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Send address for our 120-page Catalogue, containing over 800 illustrations of all the latest and most elegant designs.



If you want the **PUREST and BEST** goods in the market, use Newman's **PURE GOLD** Baking Powder, Spices, Flavoring Extracts, Cream Tartar, Saleratus, &c., put up under the above Trade Mark, and now in use by 50,000 families in the United States, Canada and the British Provinces. For sale by all first-class Grocers in the country.

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A PRIZE. Send six cents for postage and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All, of either sex, from first hour. The broad road to fortune opens before the workers, absolutely sure. Address True & Co., Augusta, Maine

AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest, best book ever sold for less that twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people Tant it. Any one can become a successful agent terms free. Hallett Book Co., Portland Maine.

NEW KIND OF STONE SAW.

A new sort of a saw for cutting stone is described in *La Samaine des Constructeurs*, which seems to have advantage over those now commonly in use, and is easily and cheaply made and operated. In place of the ordinary long steel blades, supplied with sand to enable them to grind their way into the stone, the new machine presents only a slender endless cord, composed of three steel wires twisted together, which is stretched over pulleys in such a way as to bring the lower portion horizontally over the stone to be cut. The frame carrying the pulleys is moveable, so that the cord can be brought into contact with the stone, or lifted away from it at pleasure, and the whole is kept in rapid motion, while water falling in drops from a reservoir above serves to moisten the stone. The three wires which form the saw differ from the ordinary kind in being square in section, and by twisting into a cord they are so turned as to present a succession of oblique cutting edges, which act, when set in motion, in nearly the same way as so many small chisels, while the rapidity with which the blows follow each other probably adds to the effect.—*Mississippi Valley Timberman.*

WOOD-WORKERS AND THE FIRE RISK.

Some months ago we made some comments on the enormous destruction of property entailed by fires throughout the United States, and since then many other journals have taken up the same subject as text for editorials. But it does not seem as if the warning or advice of the press has had much effect, for our monthly record of fires in saw mills and woodworking establishments is as long as ever, and as regards other lines of industry, the latest statistics show that the fires of the first six months in 1884, have been even more numerous and destructive than those of the preceding year. The losses by fire in the United States and Canada during September amounted to $9,200,000, a larger loss than ever before recorded for the month. There were seventeen fires where the loss reached or exceeded $100,000, among them being the $1,000,000 fire in Cleveland. So far, the fires of 1884 have been at a rate which, if keep up until the end of the year, will make the year's fire loss foot up $111,000,000.

A prominent manufacturer of woodworking machinery recently informed us that at least 30 per cent of his business consisted in replacing machines that had been ruined by fire.

And a very large part of this enormous loss is due to nothing but sheer carelessness in owners of property or their employes. In the list of fires given in this issue at least eight were palpably occasioned by such heedlessness, and if wood-workers, aware that they are surrounded by combustible materials, are yet so careless, it is likely that persons engaged in other industries not so obviously exposed to the fire risk are still more reckless.

The special feature of fires in woodworking establishments is that when once started they are rarely extinguished while anything remains on which the flames can feed. This is the rule even in the large cities and towns where the fire departments are most efficient, but the majority of woodworking factories, saw mills, etc., are situated in places where the means of extinguishing fire are only such as are provided by the owners of these establishments. Yet, as we have pointed out, the city woodworker is not much more secure from fire than his fellow in the country— when the flames have once started, and with both main reliance should be placed, first on precautions for preventing fire, and second on handy appliances for extinguishing a small blaze before it gets much headway.

Among the means of averting fires may be mentioned the enforcing of strict discipline among employees, the use of asbestos or other fire-proof compositions in places exposed to heat or sparks, and care in the arrangement of the furnaces and boilers, and in providing a good water supply.

But when in spite of these precautions the fire breaks out, the woodworker's handy appliances for promptly extinguishing the blaze must come into play. If provided with automatic sprinklers and hand grenades or other portable weapons for fighting the flames, his property may be saved; but if his sole reliance in such an emergency consists in a few buckets that may or may not hold water, the chances are that his establishment will be converted into smoke and ashes before outside assistance can arrive.

It therefore seems to us that the woodworkers can find no more useful occupation for liesure hours than the examination of the various devices for extinguishing fires that are now in the market. There are many of them, and it is not our attention to call attention here to any one in particular. We are willing that he shall pay his money and take his choice, but we think the time has certainly come for making this choice.

Such at least is the impression we derive from the lengthening list of fires and the proposed general increase in insurance rates on factory property.—*Saw Mill Gazette.*

WARPING OF WOOD.

It is said that the wood on the north side of a tree will not warp as much as that from the south side, and that if trees are sawed in planes that run east and west, as the tree stood, it will warp less than if cut in the opposite direction. However this may be, it is certain that the tendency to warp when sawn into boards is much greater in green than in dry wood, and that the convex side of the curve was always toward the heart. This warping, due to unequal shrinkage, and to the more open texture of the external portion of the tree, is not found to occur in the middle plank or board of the log, excepting as it may in a slight degree reduce the breath. This quality of not warping, which is in many cases indispensible for certain uses, as, for example, in the sounding boards of pianos, is secured in the case of spruce timber by first quartering the logs, and then sawing them with the angle downward. It is then sawed into boards very nearly at right angles with the line of annual growth, and a small triangular strip must be taken off to make the board square edged, but qualities of stability and strength are secured that could not otherwise be had.—*Canadian Manufacturer.*

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c, measured and culled to date :—

	1882.	1883.	1884.
Waney White Pine..	2,786,325	3,366.019	2,198,453
White Pine.....	7,680,997	7,124,161	3,686,744
Red Pine.....	1,446,574	475,661	327,735
Oak	1,149,452	1,851,624	772,042
Elm.....	701,026	309,261	653,812
Ash.....	263,481	257,028	410,458
Basswood	1,348	2,244	4,121
Butternut.....	2,639	1,028	1,260
Tamarac.....	51,798	7,409	19,113
Birch & Maple.....	268,333	138,803	201,289
Masts & Bowsprits...	33pcs	—pcs	—pcs
Spars.....	51 pcs	— pcs	41 pcs
Std. Staves.....	368.1.1.27	677.3.0.15	93.6.1.12
W. I. Staves.....	1171.0.1.7	619.2.3.20	260.8.0.19
Brl. Staves.....	75.4.3.23	115.3.0.16	9.7.1.0

JAMES PATTON,
Quebec, Oct. 31. Supervisor of Cullers.

ALGERIAN FORESTS.

The forests comprised in the colonized parts of Algeria include at the present time some 14,000,000 of trees, viz.: 6,019,011 large forest trees and 8,373,566 mulberries, resinous and ornamental trees. According to the official returns there are 278,325 hectares covered with cork oak, 605,622 with evergreen oak, 42,742 with cedar, while the remainder of the forest area is occupied by the tree known as oak-zeen. Aleppo pine, thuya, wild olive, eucalyptus, pistachio, locust bean, broom, etc. The majority of the cork trees are in the province of Constantine, fringing the coast line of La Calle and Bougie. Here also grows the oak-zeen, peculiar to Algeria, which resembles the white oak, but has a leaf like a chestnut. Some of these trees, and especially in the forest of Skira, on the Tunis frontier, grow to a colossal size, and are excellent for shipbuilding purposes. The chestnut flourishes in the forest of Edough, near Bona, while the plains in the neighborhood of the coast contain elm and ash, and the river valleys willow, elder and poplar. The lower chains of the Atlas range are covered with evergreen oak, mingled with broom and sweet acorn oaks. On the ranges above are the thuya, Aleppo pine, and maple, though these latter are limited in their localities, such as the Aures hills and the environs of Bathna, where the summits of the mountains are thickly planted with cedar. Toward the coast of the province of Algiers are the forests of Sahel and Mazafran, near Koleah, the latter possessing huge ash trees interlaced with the wild vine; but the true forest country does not commence until we reach the Atlas mountains, where are the forests of Ak-Fordoun, with very large oak-zeens, the forests of Beni-Menasser consisting principally of wild olive, the forest of Ourensenis, of thuya and Alleppo pine, and the venerable forest of Tenietel-Haad, where the cedars are from 15 to 18 feet in circumference and from 45 feet to 100 feet in height. The province of Ouran is erroneously said to be bare of trees, but, though they are rather scanty in the coast section, the plateaux of the mountains are heavily timbered, especially beyond Mascara as far as Sebdou. The forests of Duya, in this neighborhood is at least 40,000 acres in extent, principally of evergreen oak, thuya and Aleppo pine.—*London Times.*

STORY OF A LUMBERMAN.

The following story is told by a writer in the St. Paul *Pioneer-Press*: "I heard a man suggest that Capt. Tainter, one of the heaviest stock holders in the firm of Knapp, Stout & Company, and worth individually millions, in all probability had been a sort of mascot to the big firm. He worked for them first until they owed him $600. He was a big, strapping, energetic fellow, who had looked after their drives and logging operations. He had a hard time in collecting the sum due him, but succeeded in securing payment. But the firm then known as Knapp, Stout & Co., got pinched and wanted just that $600. So they made a proposition to young Tainter to give him a fourth interest in the concern for that amount. He thought it a risk, but took the chance. Since then the bing lumbering firm—the biggest in the country—has multiplied its possessions rapidly. Capt. Tainter lives in a baronial mansion in Menomonee, a feature of which is a bathing tank 50 feet long, and proportionately wide."

The Northwest.

Our attention has been called in various ways to the forest wealth of the Canadian Northwest, and recently we published some account of it given by the Calgary *Herald*. Its extent is not yet fully known. Mr. W. C. Van Horne, General Manager of the Canadian Pacific Railyaw Company, has lately been over the mountain section of the line, and thus remarks about the country it traverses :—"In addition to the agricultural possibilities of the many valleys of British Columbia, and its great mineral wealth, its magnificent forests alone will furnish a large and remunerative traffic for the railway."

A Busy Saw.

We learn from Mr. Louttit, manager of Gilmour & Co's saw mill above this village, that his operations in lumber this year will amout to a cut of about one million feet, and this work has been done by one circular saw. This exceeds last year's business by 400,000 feet. Up to the present time he has turned out close on to 900,000 feet. Since the 1st of July he has disposed of 500,000 feet, the largest record ever made there in the same number of months. In this trade alone, many thousands of dollars have changed hands during the summer.—*Campbellford Herald.*

Bridges on Canadian Pacific.

A special from Ashland, Wisconsin, says that twenty carloads of lumber have been received at the Wisconsin Central Railway dock there from the Omaha road, for shipment to McIntyre, Wood & Co., north shore, to be used in constructing bridges on the Canada Pacific. McIntyre, Wood & Co. have also purchased over 2,000,000 feet of bridge timber from the Superior lumber Company of Ashland. It is now being shipped by boat to the north shore as fast as possible.

SCHOONER LOST.

PORT COLBORNE, Nov. 1.—The schooner sunk off Gull island turned out to be the schooner New Dominion. A tug went to her yesterday evening and examined her sails and got some articles off her which have been identified as belonging to the New Dominion. The New Dominion was laden with about 300 tons of coal for the gas works, St. Catharines, having loaded at Cleveland. She registers 152 tons, and was owned by Capt. James Griffith and Capt. John J. Daly. They were both of them aboard the ill-fated vessel. Griffith served as master and Daly as mate. A sailor named Daniel Murray and the captain's sister-in-law, who served as cook, formed part of the crew. There can be no doubt now but that the crew have all lost their lives. Capt. Griffith and Daley are well known along the lakes, having commanded a number of different vessels in the past twenty years. The former leaves a widow and family in St. Catharines and the latter leaves a widow an family in Hamilton, but formerly lived in St. Catharines. He sailed the schooner Laura before buying into the Dominion. The vessel was valued at $3,500 and insured for $2.500.

TRAPPED BY FLAMES.

HUNTINGTON, Pa., Nov. 3.—A dwelling house, occupied by Jas. Holt and Geo. Rogers and families, the former having a wife and four children, and the latter a wife and three children, was burned this morning. The fire originated in the lower storey, immediately beneath the occupants, who were in bed. Before they were awakened the usual means of egress were cut off, and they were obliged to escape through the upper windows. Holt threw out a chaff bed and then threw his wife and children out on it. Rogers assisted his wife to a short ladder which leaned against the house, and before she reached it the fire burst ouf of the side of the building and burned her hair and clothes completely off. He then threw his children from the second story window and followed himself by jumping. The house together with its contents were totally destroyed and the escaping inmates seriously injured, the children of Holt fatally.

The Greenwich Meridian Accepted.

WASHINGTON, Nov. 1.—The international meridian conference held a final meeting to-day. Minutes of the proceedings were submitted and approved. An official copy of the proceedings will be delivered to the Government of the United States, and will no doubt be made the basis of a treaty upon the resolution adopting the meridian of Greenwich for a universal initial meridian. Only one nation voted in the negative. San Domingo, France and Brazil abstained from voting. The proposition defining a universal day was almost unanimously supported

Worshipping Trees.

"The ancient people of India" says Quintus Curtius, "had a profound veneration for certain rees, before which they were in the habit of kneeling in the attitude of devotion, and the most terrible punishment awaited the sacrilegious transgressors who dared injure one of them." There are two kinds of trees in Persia that are worshipped to this day. The one is the divakeh-i-fusel, or tree that surpasses the rest, the other the dir-dar, or the tree of the genii. The true believers decorate these trees with strips of precious stuffs. The ancient Persians had a particular veneration for the barrom, a gigantic tree over which the sun, as they believed, kept watch in an especial manner.

THE tie business seems to be dull this season and it will not take much trouble to fill the contracts—when we consider that there are only 20,000 wanted, while last year, we understand, Mr. Gould took out over 50,000. We are sorry that this is the case as we looked forward to having a lot of Mr. Gould's money scattered through the back country this winter, particularly as the lumbering is going to be dull.—*Minden Echo.*

THE Superior Lumber Company, of Ashland, Wis., has decided to put in 10,000,000 feet of logs this winter.

Chips.

THE Merrill and Muskegon booms have closed operations.

LOGGER'S wages in Duluth, Minn., district this winter will range from $15 to $20 a month.

THE mill of White & Wilcox, at Cheney, Mich., will run all winter and ship to eastern markets.

THE stock of sawed lumber in the Duluth, Minn., yards is stated to be about sixty-three million feet.

C. MERRILL & Co.'s mill at Saginaw, has shut down after averaging about 150,000 feet daily for 147 days.

THE Tittabawassee Boom Company, Mich., have set their stakes at 580,000,000 feet of logs for the season's operations.

IT is expected that the new tannery at Petoskey, Mich., will use about 12,000 tons of hemlock bark per year.

THE schooner Ernest, from Apple river, lumber, sprang a leak and filled with water at a wharf at St. John, N. B., October 20th.

MATTEWS BROTHERS, manufacturers of sash, doors, and blinds, at Belfast, Me., have cut up 1,000,000 feet of lumber during the past year.

THE Rainy Lake Lumber Company is towing 3,000,000 feet of logs from Falcon island to its mill at Rat Portage, Ont., to be sawed in the spring.

IT is estimated that nearly 100,000,000 feet of lumber will be wintered over at Au Sable and Oscoda. This is larger amount than ever held over there before.

RECENTLY F. W. Gilcrest's wharf, at Alpena, Mich., gave way, and 120,000 feet of lumber was thrown into the water. The lumber belonged to R. D. Taylor, and was recovered.

ON October 23rd a large circular saw in the Rainy Lake Lumber Company's mill at Rat Portage, Ont., burst., and a piece struck E. Erret in the eye, severely injuring him.

F. THOMPSON, of Rat Portage, Ont., has two camps containing 50 men at work in new territory around Crow Lake. The timber is being gotten out for the firm of F. T. Bulmer & Co.

A COPIOUS rain about October 23red, extinguished the forest fires in the southern part of New Jersey, that had been raging for several days. About $250,000 worth of property was destroyed.

THE proposed lumber yard, for wholesale distribution at Saginaw, of Cross, Gordon & Randall, is being stocked. An office building and other yard appurtanances have been provided.

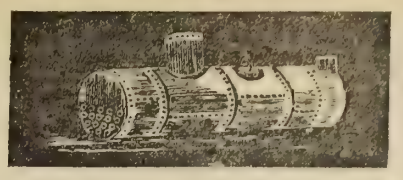
SEVERAL searons ago the Lehigh Valley railroad, Pa., ordered 75,000 cypress ties from the South, and the result of the experiment has been very satisfactory. The ties are showing excellent lasting quality.

THE Duluth Lumber Company, Duluth, Minn., shut down its mill November 1. Their season's cut has been 23,650,000 feet of lumber, 20,000,000 shingles, 5,500,000 lath and 1,000,000 pickets. The company has 10,000,000 feet of lumber on hand, and will do no logging this winter.

LUMBERING operations in the woods are very quiet now, all the camps intended to be established this season—about one third the number of last—are now in full operation, but the season's cut will be an unusually small one.—*Parry Sound North Star.*

ST. STEPHEN parties have entered into a contract with F. H. Todd & Sons, the big lumbermen of the St. Croix, says the Moncton *Times*, to haul and drive during the coming season 15,000,000 feet of logs, and from 5,000,000 to 6,000,000 feet each year the next succeeding five years.

WAGES in the woods the coming winter says the *Lumberman's Gazette*, are announced at $16 to $20 at Ludington. If operations in the woods are heavily curtailed, according to reports, wages will rule lower than the figures named. Reports from Roscommon say that men are going into the woods in large numbers, and wages are from $15 to $20 a month for common laborers, and $30 to $50 for scalers, foremen, etc. We remember when a good foreman commanded three times the latter figure.



(*ESTABLISHED 1852.*)

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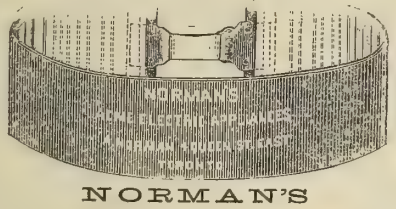
SECOND HAND.

One 50 Horse-power Engine.
One Pr. 35 " "
(COUPLED)
One 16 " "
One 10 " "
One 4 " "
Boilers, 4 to 25 Horse-power.
Steam Pumps, Drills, &c.
625 Feet Wire Rope,
(2¾ in. AT A VERY LOW PRICE.)

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Electric Belt Institution,

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NERVOUS DEBILITY, Rheumatism, Lame Back, Neuralgia, Paralysis and all Liver and Chest Complaints immediately relieved and permanently cured by using these BELTS, BANDS, AND INSOLES.
Circulars and Consultation FREE.

A FEW SIMPLE TESTIMONIALS THAT SPEAK FOR THEMSELVES.

OTTAWA, September 3rd, 1883.

A NORMAN, ESQ.—Dear Sir,—I have experienced considerable benefit from your appliances. I feel stronger and better every day.

Yours truly, R. E. HALIBURTON.

PETERBOROUGH, October 15, 1883

A. NORMAN.—Dear Sir,—Soon after I commenced to use your Electric Appliances, they opened my bowels, cured my cough and cold, relieved my head and considerably relieved my catarrh in consequence. The discharge from my head and chest are now easy, and I feel altogether better. My digestion has improved, my stomach less sour and windy, and I am less troubled with lascivious and vivid dreams. I had previously tried almost all the advertised patent medicines without deriving any good.

Yours truly, J. GREEN.

CURATIVE BATHS, Electric, Vapor, Sulphur and hot and cold Baths. Baths have been admitted in all ages by every school of medicine, to be one of the best means of curing ailments, maladies and diseases. The Electric Bath is the latest and best discovery in this line. Come and try them, at

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L14-1y A. NORMAN, Proprietor.

GOLD for the working class. Send 10 cent for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Augusta, Maine.

National Manufacturing Co.

160 Sparks Street,

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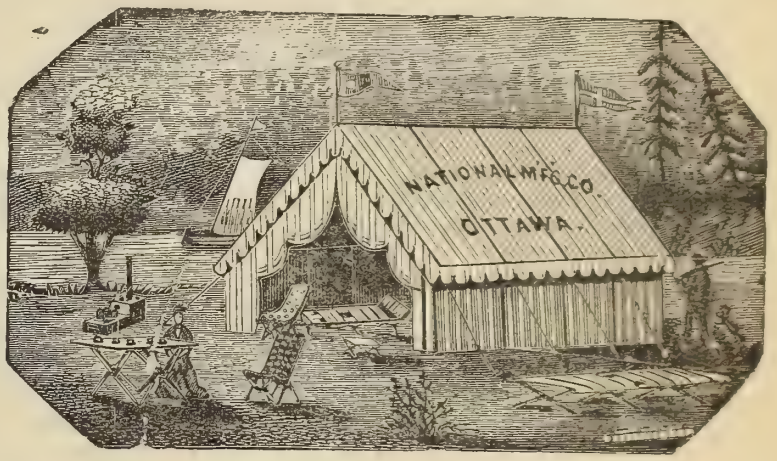
Have been awarded every Medal ever offered at Exhibitions in Canada for our Lines of Goods, notwitstanding the misleading advertisements of unscrupulous firms claiming awards, medals, &c., which they have never received. See letter from H. J. HILL, Esq., Secretary Toronto Industrial Exhibition Association, below. This year at Toronto, Montreal and Ottawa Exhibitions, we have been awarded

10—MEDALS—10

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P. O. BOX 345.

OFFICE OF THE INDUSTRIAL EXHIBITION ASSOCIATION,
TORONTO, MARCH 10, 1884.

The National Manufacturing Co'y, Ottawa:

GENTLEMEN,—In reply to your enquiry, I beg to say that the highest awards made at the Industrial Exhibition for the years 1881, 1882, and 1883, for Tents, Marquees and Flags, were to your Company, being a Silver Medal for each year. Last year, 1883, was the first in which a medal was specially offered for Camp Furniture and Equipages, and it was awarded to the National Manufacturing Co'y, of Ottawa.

I am, your respectfully,

6mL20 H. J. HILL, Manager and Secretary.

Market Reports.

TORONTO.

From Our Own Correspondent.

Nov. 10.—During the last two weeks fourteen vessels have left our docks with cargoes aggregating 2,150,000 feet. A small portion of this was consigned to purchasers on the line of the Welland Canal, and the balance to Oswego, N. Y., and it is probable that as much more will get off during the next two weeks which will about finish up the season's business so far as foreign shipments are concerned. Sales from the yards are far from what might be reasonable expected at this season, and prices are badly cut up, in fact it would be impossible to give you any quotations as to prices that could be called reliable. Wholesale men are competing with the retailers for a portion of the retail trade, and, as a consequence, the retail men cut exceedingly low in order to secure a portion of the small amount of trade going. It is certainly unjust on the part of the middlemen to seek any part of the trade legitimately belonging to the retail men; however, I have before pointed out the fact that the remedy is in the hands of the latter if they choose to avail themselves of it. But in union only lies strength, and I am convinced that it would be to the interests of both parties if this matter could be amicably and definitely arranged, and in order to do this mutual concessions would have to be made. Much speculation is now going on amongst our lumbermen as to the probable state of trade for the season of 1885. It is much too early, however, to speculate with any degree of certainty as to future operations and future prices. Let our mill men follow the example set them by our American neighbors and curtail the coming seasons log cut. But our main hope must centre in the probable change of Government on the other side of the lakes leading to the abolition of the duties now imposed on lumber, once that bar is removed our common lumber will find a fair market, and until such is the case the lower grades of lumber must remain more or less a drug on the market.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
Scantling and joist, up to 16 ft	13 50
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 00
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	20 00
" " " 32 ft	21 00
" " " 34 ft	22 50@22 50
" " " 36 ft	24 00
" " " 38 ft	27 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	24 00
" boards "	20 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 00
Three uppers, Am. inspection	35 00@40 00

B. M.

1½-inch flooring, dressed	30 00
1½ " " rough	16 00
1¼ " " dressed	25 00
1¼ " " undressed	15 00@15 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	2 90
Sawn Lath	2 75

WINNIPEG.

The *Commercial* of a recent date says:—The amount of business done in this trade during the week has not been heavy, although small sales for finishing work have been quite numerous. Mills are still running, although they are near to the end of their season's cut. While there are few reasons for congratulation about the season's trade, it is about to close with a much more hopeful outlook than it had a year ago. Stocks are very light compared with what they were near the close of 1883 and by spring will doubtless be so low as to warrent next season opening with prices on a paying level.

MONTREAL.

From Our Own Correspondent.

Nov. 8.—Business in all lines in this city is in a very dull and stagnant state at present, and two holidays during the past two weeks has helped to make things quieter in the lumber trade. There has been nothing doing in a wholesale way and only a few small country orders have been received. Winter stocks are now about complete, and have been laid in with great care and economy, but do not show such an amount as was held at the same date of 1883. Prices are unchanged. We quote ex yard as follows:

Pine, 1st quality, ℔ M	$35 00@40 00
P ne, 2nd " ℔ M	22 00@24 00
Pine, shipping culls, ℔ M	14 00@16 00
Pine, 4th quality deals, ℔ M	10 00@12 00
Pine, mill culls, ℔ M	7 00@ 9 00
Spruce, ℔ M	10 00@13 00
Hemlock, ℔ M	9 00@10 00
Ash, run of log culls out, ℔ M	15 00@18 00
Bass, " " ℔ M	15 00@20 00
Oak, ℔ M	40 00@50 00
Walnut ℔ M	60 00 100 00
Cherry, ℔ M	60 00@80 00
Butternut, ℔ M	25 00@35 00
Birch, ℔ M	20 00@25 00
Hard Maple, ℔ M	25 00@30 00
Lath, ℔ M	1 60@ 0 00
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 50@ 0 00

SHIPPING.

The shipping season is now about at an end, and there are no engagements for freights reported and shipments have nearly ceased. Since the date of our last report only the following shipments have been recorded:—SS Barcilona, for London, 290 pcs deals; Bk. Crown Prince, for London, 24,242 pcs deals and 713 ends; SS Pensher, for London, 31,817 pcs deals; SS Paramatta, for Buenos Ayres, 822,236 feet white pine lumber; Bk Teutonia, for Buenos Ayres, 30,116 pcs pine lumber; SS Lake Huron, for Liverpool, 2,332 deals; SS Escalona, London, 9,583 deals and ends, 8,388 boards and 275 longitudinals; SS Vancouver, for Liverpool, 4,517 deals; Bk Alpheus Marshall, for Buenos Ayres, 878,412 feet lumber.

CORDWOOD

is a little dearer, and wood say about 4½ feet long is now delivered at the railway wharf, Point St. Charles, at our quotations. The demand is still slow, but now that the cold weather has set in business is expected to improve. We quote at the wharves ex cartage as follows:

Long Maple	$ 5 50
Long Birch	5 00
Long Beech	5 00
Tamarack	4 00

QUEBEC.

The *Chronicle* of Nov. 7th says:—From what we can learn there is not likely to be any more transactions this season, as the shipping houses show little disposition to purchase, and will only do so on their own terms and to a limited extent. Some waney board is reported to have been sold, at prices which have not transpired, for next year's delivery. We do not hear of any transactions in Ottawa rafts. In hard woods contracts are now being made for next season, and we understand some choice oak, of about 70 feet, has been placed at 48½ cents.

DEALS.—Pine deals are in demand, and inquired for, especially lots having a fair proportion of 1st and 2nd quality. In spruce deals there is nothing doing, and the prices in Great Britain are still exceedingly low for this article.

CHICAGO.

AT THE DOCKS.

The *Northwestern Lumberman* of Nov. 8th says:—The week has been stormy, chilly, and exciting, and unfavorable to business, but the market has been quite active notwithstanding. Contrary to general expectations arrivals have been numerous, the market having been fairly well supplied with offerings on Monday, Tuesday and Wednesday. Though Tuesday was election day, and Wednesday scarcely less exciting, trading was so brisk that on Thursday morning but half a dozen cargoes remained unsold. During the week 179 loads reached port, a large proportion of which stopped at the market.

There has been complaint that the dimension offered was generally of indifferent quality, and gave a poor opportunity for judicious selection. Yet all have been purchased at prices a little in advance of our later quotations. Desirable green piece stuff is now selling for $8.50, an advance of 25 cents a thousand on previous prices. Dry dimension brings $9 a thousand. These figures are realized with less haggling than during the early part of the fall.

The firmness and slight advance in the price of dimension has affected inch lumber sympathetically, and while it is not necessary to advance quotations it can be safely said that desirable No. 2 stock is somewhat firmer and quicker of sale at full quotations.

The quantity of shingles arriving continues to be limited to the actual demand. Prices are firm and sales are readily made. Lake rates have advanced 25 cents a thousand from the principal east shore ports, and the prospect is that there will be a still further advance.

Quotations are as follows:

Piece stuff, green	$ 0 00@ 8 50
Long timber, green	10 00@12 00
Coarse common	9 00@ 9 50
Boards and strips—No. 2 green	9 50@11 00
Boards and strips Medium, green	11 00@15 00
Boards No. 1, green	15 00@18 00
High grade	18 00@22 00
Shingles, standard	1 80@ 1 85
Shingles, Choice	1 90@ 2 00
Shingles, extra	2 00@ 2 25
Shingles, clear	2 80
Shingles, cedar	1 35@ 1 80
Lath	1 25@ 1 40

LAKE FREIGHTS.

Grand Haven by steam	$ 1 50
Muskegon by steam	1 50
Whitehall	1 62½
Ludington	1 75
Manistee	1 75
Menominee dry	1 50
" green	1 62½
Oconto	1 62½
Cheboygan	1 50
Alpena	1 75
Bay City	2 00
Frankfort	1 62½

AT THE YARDS.

Taking everything into consideration, a remarkably good trade is prevailing. Business this year is contending with exceedingly adverse conditions. The election excitement alone is sufficient to paralize trade. Added to this is the general depression that has prevailed, an overstock of lumber, and low prices for farm products. The fact is that despite all these there is a healthy demand for lumber.

For two days during the week there was a three cent rate to St. Louis, and some shippers sent out men to take orders in Missouri based on the low rate. The sudden restoration of rates arrested the men on the way to their fields of intended operation, and they were ordered back home. Some yards received orders on the 3-cent rate, and were left in the lurch. The yard men begin to think that it requires the nimbleness of circus athlete to keep on the right side of southwestern freight rates.

Shingles are selling at prices a little stronger than prevailed a week since. Some dealers have made a slight advance.

Receipts of lumber, shingles, etc., from Jan. 1st to Nov. 6th as reported from the Lumberman's Exchange:—

RECEIPTS.

	Lumber.	*Shingles.*
1884	49,773,000	25,296,000
1883	51,171,000	35,520,000

FROM JANUARY 1, 1884, TO NOV. 6, 1884, INCLUSIVE.

RECEIPTS.

	Lumber.	*Shingles.*
1884	1,649,841,000	795,087,000
1883	1,717,817,000	1,029,235,000
Decrease	67,976,000	234,148,000

LAKE RECEIPTS FROM JAN. 1 TO NOV. 6.

Lumber	1,640,668,000
Shingles	757,702,000
Lath	59,674,000
Posts	2,466,296
Railroad ties	859,191
Wood, cords	24,445
Bark, cords	21,250
Slabs, cords	41,857
Telegraph poles	140,696
Piles	517
Spars	12

STOCK ON HAND OCT. 1.

	1884.	1883.	1882.
Lumber & timber	665,325,195	611,369,920	660,118,942
Shingles	335,262,075	381,942,939	265,289,150
Lath	63,388,268	54,038,772	52,267,802
Pickets	2,157,347	1,661,537	3,368,270
Cedar posts	458,787	349,493	161,719

FREIGHT RATES TO EASTERN POINTS.

In effect from Nov. 1st, 1884, to March 1st, 1885.

Chicago to—	
New York and common points, per 100 pounds	35c.
Albany	32c.
Boston and common points	40c.
Philadelphia	32c.
Baltimore	32c.
Washington	32c.
Buffalo and Pittsburgh	20c.
Erie, Pa	20c.
Dunkirk, N. Y	20c.

BOSTON.

The *Journal of Commerce* of Nov. 8th says: The situation is without material change. Pine moves steadily at previous prices, with a moderate demand. Laths are having a good call, and are quite firm. Spruce is rather firmer, with many of the mills troubled with low water. Yellow pine is as slow and as dull as ever. Hardwoods are also moving in a quiet and limited way, with a fair enquiry for good grades of walnut. Cherry is going slowly, with little changes in other woods.

CANADA PINE.

selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@36 00

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ℔ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	45 00@50 00
Pine, good box	22 00@23 00
Pine, common box	13 00@15 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 16@00 21
Pine, 10-in. boards, 16 ft., ℔ M	28 00@32 00
Pine, 12-in. boards, 16 ft	28 00@32 00
Pine, 12-in. boards, 13 ft	28 00@00 00
Pine, 1¼ in. siding, select	40 00@43 00
Pine, 1¼-in. siding, common	20 00@00 00
Pine, 1-in. siding, select	42 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 10
Spruce, plank, 1¼-in., each	00 00@00 26
Spruce, plank, 2-in., each	00 00@00 20
Spruce, wall strips, each	00 12@00 30
Hemlock, boards, each	00 00@00 12
Hemlock, joist, 4x6, each	00 00@00 14
Hemlock, joist, 2¼x4, each	00 00@00 33
Hemlock, wall strips, 2x4, each	00 00@00 14
Black walnut, gook, ℔ M	100 @120 11
Black waluut, ¼ inch	80 00@90 00
Black walnut, ¾ inch	00 00@85 00
Scaymore, 1-inch	30 00@32 00
Scaymore, ¾-inch	23 00@25 00
White wood, 1-inch and thicker	38 00@43 00
White wood, ¾-inch	30 00@32 00
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@65 00
Cherry, common, ℔ M	25 00@30 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	38 00@40 00
Chestnut, ℔ M	0 00@ 6 50
Shingles, shaved, pine, ℔ M	0 00@ 5 00
" 2nd quality	4 50@ 4 50
" extra, sawed, pine	0 00@ 3 00
" clear, "	0 00@ 3 30
" cedar, mixed	0 00@ 2 00
" cedar, XXX	0 00@ 2 00
" hemlock	0 00@ 2 00
Lath, hemlock, ℔ M	0 00@ 2 50
Lath, spruce, "	

OSWEGO, N.Y.

Three nppers	$42 00@46 00
Picking	32 00@35 00
Cutting up	22 00@25 00
Fine Common	20 00@22 00
Common	14 00@18 00
Culls	11 00@14 00
Mill run lots	16 00@22 00
Sidings, selected, 1 in	30 00@35 00
" 1¼ in	32 00@36 00
Mill run, 1x10, 13 to 16 ft	16 00@21 00
Selected	21 00@24 00
Shippers	14 00@16 00
Mill run, 1¼x10	17 00@20 00
Selected	21 00@30 00
Shippers	14 00@16 00
Mill run, 1 & 1¼ in. stripe	15 00@18 00
Selected	22 00@30 00
Culls	11 00@13 00
1x7 selected for clapboards	25 00@35 00
Shingles, XXX, 18 in. pine	4 00@ 4 55
Cedar	3 00@ 3 50
Lath, No 1	2 00@ 2 20
No 2	1 75@ 2 00

TONAWANDA.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@13 00

BUFFALO.

We quote cargo lots:—

Uppers	$45 00@46 00
Common	17 00@18 50
Culls	12 50@13 00

LONDON.

The *Timber Trades Journal* of Nov. 1st says: If there is no near prospect of prices advancing, it may be pretty safely calculated that they will not drop much lower than they are now.

The Quebec pine ex Bertie Biglow disposed of on Wednesday went cheap, the 2nd bright 11 to 15 in. at £16 being a bargain, and the oddments at £14 15s. were also under price. 3rd regulars of this parcel seemed to hang fire at £9 5s., and though one lot of 16 feet realized another 10s., the prices were mostly lower than we expected in view of the anticipated shortage of this description of goods next year and the moderate stocks that are now in hand.

The dry floated 3rd ex Juniper, we observed, went at similar prices, and would seem to imply that the bright, above mentioned, did not represent one of the leading productions from Quebec.

The spruce goods, by comparison went some-

what better, 1st quality plank realizing £12 10s. and 2nd £8 10s., poor prices in themselves, but good when compared with the low values that are still being realized under the hammer. The Saguenay pine planks ex Kong Oscar were represented by a couple of lots of various lengths, with a few broad among them, the longer of which was secured at £9, the 10 and 11 feet at 16s. less. Considering the great superiority of Quebec over Saguenay pine, and this cargo especially, we reckon the latter sold well at the prices named; 9 in. went at lower prices, but one with another there were no great sacrifices to record.

The red pine by this last named vessel fetched capital value when it changed hads at £14 for 1st quality, and the 2nd at £9 5s. also were, we consider, sold for fully as much as they were worth. When red pine used to be sent to this market in the shape of hewn logs, it commanded proportionately better values than it does now in a manufactured state, the sap on the converted wood being the chief objection; besides this there are the large supplies of pitch pine now available to take its place at a lower rate of cost.

We note for certain class timber good prices are generally forthcoming, and there is generally a more hopeful tone in the market than has been apparent for a considerable time. There is no question but that in high-class joiners' wood this market is very moderately supplied, and we shall probably see all through the winter values of choice kinds gradually ascending.

It is confidently stated that a very active demand is being done outside the London public sales and very good prices obtained, but we expect it is still confined to the better sorts. Nevertheless there is something very unusual in the absence of Swedish goods at the auctions.

AUSTRALIA.

Messrs. Lord & Hughes' monthly circular, dated Melbourne, Sept. 20th, says:—

Since our last advices on 23rd ult., we have to report considerable quantities of timber of most descriptions having been offered at auction, and as we then anticipated, the transhipments of Baltic and American timber at Adelaide for this port have tended to unsettle our market, and prices are lower, while Oregon is slightly firmer. Importers are disposed to meet the market at reasonable rates, but do not seem inclined to submit to a successive decline. Trade from the yards continues steady, and is now in a healthy condition.

The arrivals have been:—Lotos, Alf, Bygdo, from Frederickstadt; City of Agra, Carl Haasted, Lindsay, from Drammen, with flooring; Furness Abbey and Samar, from Boston; Sea Witch, from New York, with clear pine, white pine shelving, T. and G. ceiling, doors, laths and plaster, white wood and slates; Goodell, from New York, with slates; Ellora, Combermere, Greta, Remington, Port Jackson, Catanio, Loch Sloy, Winefred, South Australian, and Ghazer, from Great Britain, with red deals, flooring, slates, lead, galvanized iron and cement; Sarah Ann and Killarney, from Kaipara, with kauri pine; J. C. Smith, from Grafton; Rodondo, Nemesis, Wendouree, Leura, and Gabo, from Sydney, with cedar; Adelaide, South Australian, Bereau, Victorian, Claud Hamilton, Franklin, from Adelaide, with redwood, ed deals, flooring, and doors; Hoihow, from Adelaide, with clear pine and red deals.

Red Deals.—Imports: 24,402 pieces from Baltic, *via* Adelaide; 22,309 pieces from the United Kingdom. The arrivals have been—Ellora, from London; Bereau, Adelaide, Victorian, Franklin, Claud Hamilton, South Australian, from Adelaide. The cargo ex Ellora was sold by auction on 2nd inst.; other public sales have been parcels ex Mermerus and Avenger, from London, and various Adelaide steamers, prices showing a decline as compared with last month; besides which, several sales privately have been made of parcels from Adelaide, prices not transpired.

Spruce Deals.—Imports: Nil. The only sale by auction during the past month has been ex Highlands, on 16th inst., 11x3 and 7x3, at 3d. per foot 9x3.

Oregon Timber.—Imports: Nil. On 12th inst. the cargo ex Helicon was all quitted publicly, at an advance on previous sales viz., £7 to £6 10s. The only other transactions at auction have been shipments of 9x3 and 11x3, ex Nanaimo.

Lumber.—Imports: Clear pine, 247,194 feet super; white pine shelving, 368,848 feet super; T. & G. ceiling, 69,494 feet super. The arrivals have been Furness Abbey and Samar, from Boston; Sea W tch, from New York; Hoihow and Adelaide, from Adelaide. Sales by auction have ex Sea Witch, Hoihow and Adelaide. The shipments ex Furness Abbey and Samar have not yet been offered at auction.

Redwood.—Imports: 184,567 feet. This arrived ex various steamers from Adelaide, portion of which has been sold privately at prices not transpired. Sales have also been made by auction of 3, 4 and 6 inch, at £10 10s. to £10 7s. 6d.

Flooring and Weatherboards.—Imports: 8,376,723 feet lineal. Ths arrivals have been Lotos, Alf, Bygdo, from Frederickstadt; City of Agra, Carl Haasted, Lindsay, from Drammen; Combermere, Loch Sloy, Winefred, from Great Britain; Franklin and Adelaide, from Adelaide. Sales by auction have been of cargoes ex Passepartout, G. P. Harbitz, and Alf, and shipments ex Helene, Mermerus, Combermere, and Loch Sloy, at lower rates, viz.:—Red, 6x1½, 10s. 9d. to 9s. 9d.; 6x⅞, 8s. to 7s.; 6x¾, 5s. 3d. to 5s.; 6x½, 5s. to 4s. 3d.; 4-out weatherboards, 6s. 6d. to 5s. 10d. White, 6x1⅛, 8s. 9d. to 7s. 9d.; 6x⅞, 7s. 9d. to 7s. 3d.; 6x¾, 5s. 3d. to 4s. 8d.; 6x½, 4s. 4d.; 4-out weatherboards, 6s. 6d. to 5s. 9d.

Kauri Pine.—Imports: 549,805 feet super. The arrivals have been Sarah Ann and Killarney, from Kaipara. The only sale by auction has been cargo ex Waitemata. The cargo ex Killarney has been sold privately, and that ex Sarah Ann is advertised for sale on 23rd inst.

Cedar.—Imports: 237,600 feet super. The arrivals have been—J. C. Smith, from Grafton, and various coasting steamers. Sales publicly have been frequent and prices are lower.

Doors.—Imports: 1,324. The greater portion of these arrived from Adelaide, and have been sold privately. There have been no sales by auction.

Laths and Pickets.—Imports: Laths, 3,025 bundles; pickets, Nil. The arrivals have been—ex Furness Abbey and Samar, from Boston, and Sea Witch, from New York. The parcel ex Sea Witch, was quitted on the 19th inst. at 32s. 6d. to 31s. 6d.

Slates.—Imports: 781,227 pieces. The arrivals have been—Goodell and Sea Witch, from New York; Samar and Furness Abbey, from Boston; Ellora, Combermere, Greta, and Remington, from Great Britain. Imports are heavy and prices much lower.

Plaster.—Imports: 673 barrels. The only sale by auction has been ex Sea Witch, of King's Windsor mills, at 12s. to 11s. 3d.

Cement.—Imports: 5,090 barrels. No private sales of any great extent are reported, but, in consequence of large arrivals, prices have still further declined, Gostling's selling at 13s., and Knight, Bevan & Co.'s at 13s. 6d.

Galvanized Iron.—Imports: 986 tons. Offerings at auction have been frequent, but sales limited to the undermentioned few lines. No private sales of note have been reported.

Explanation.—Red deals and spruce deals are sold at per foot of 9x3; T. and G. flooring at per 100 feet running; Oregon timber, redwood, clear pine, shelving, ceiling, per 1,000 feet super; Kauri pine and cedar logs at per 100 feet super; laths, pickets, and slates at per 1,000 pieces.

From a recent report from the president of the Wooden Pump Manufacturers' Association of the United States it is learned that the number of wooden pumps manufactured annually in this country varies from 100,000 to 200,000, the latter figure being reached in 1881. The amount of wood in a pump is, on an average, from 40 to 50 feet; so that the amount of poplar going into consumption in this line is from 8,000,000 to 10,000,000 feet per year.

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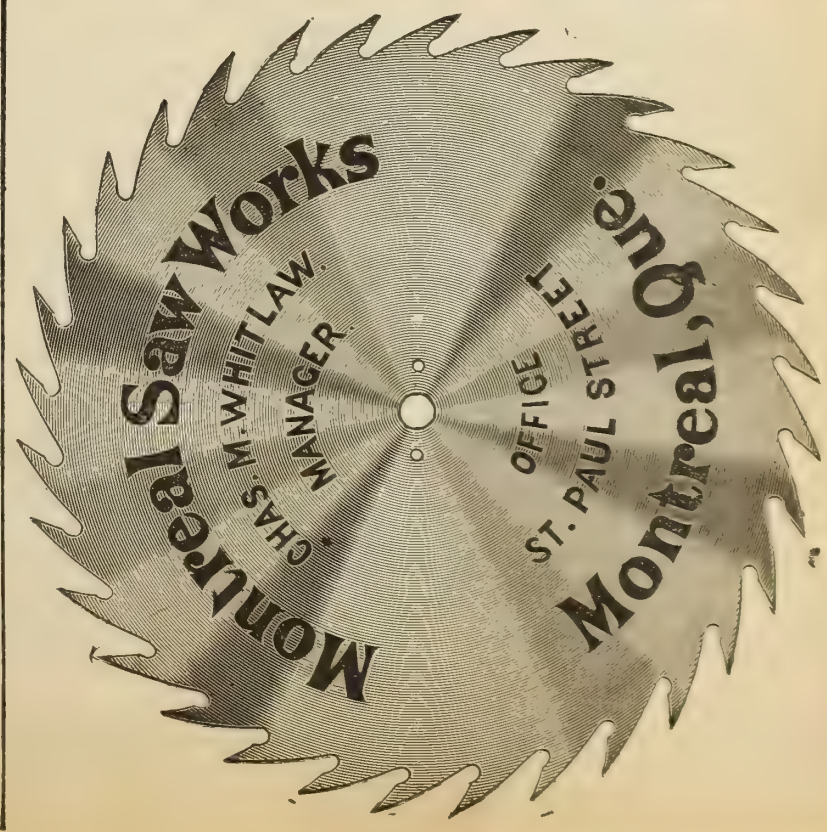
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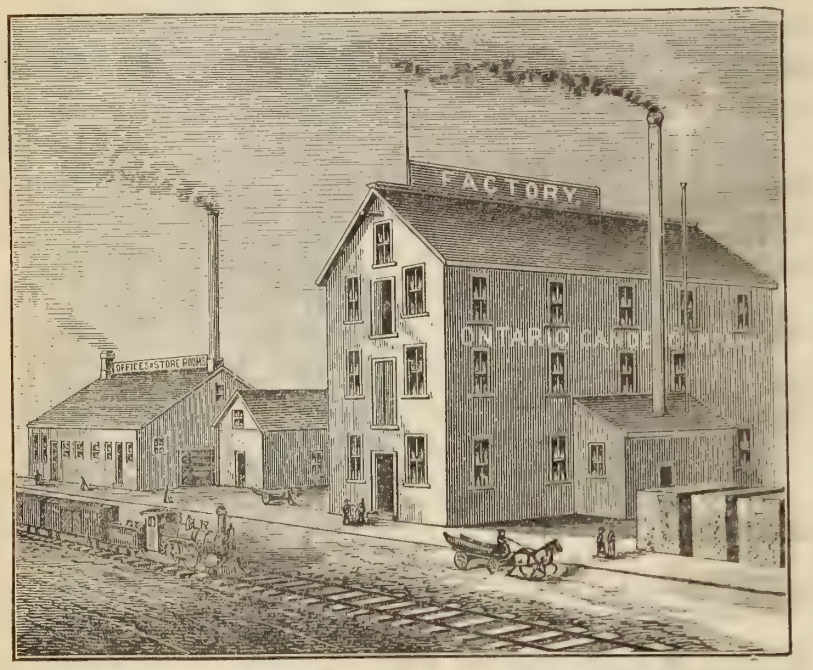
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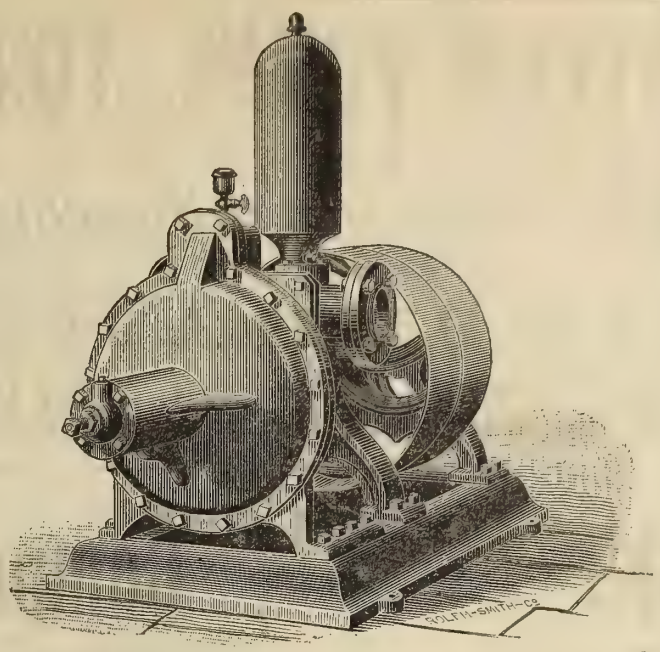
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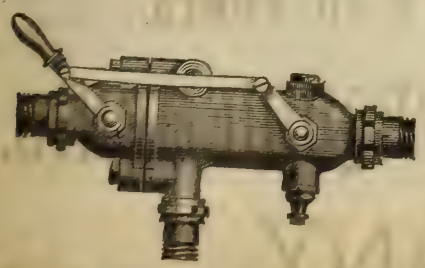
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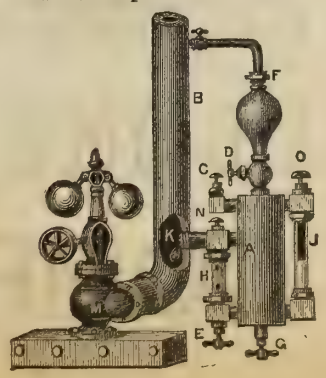
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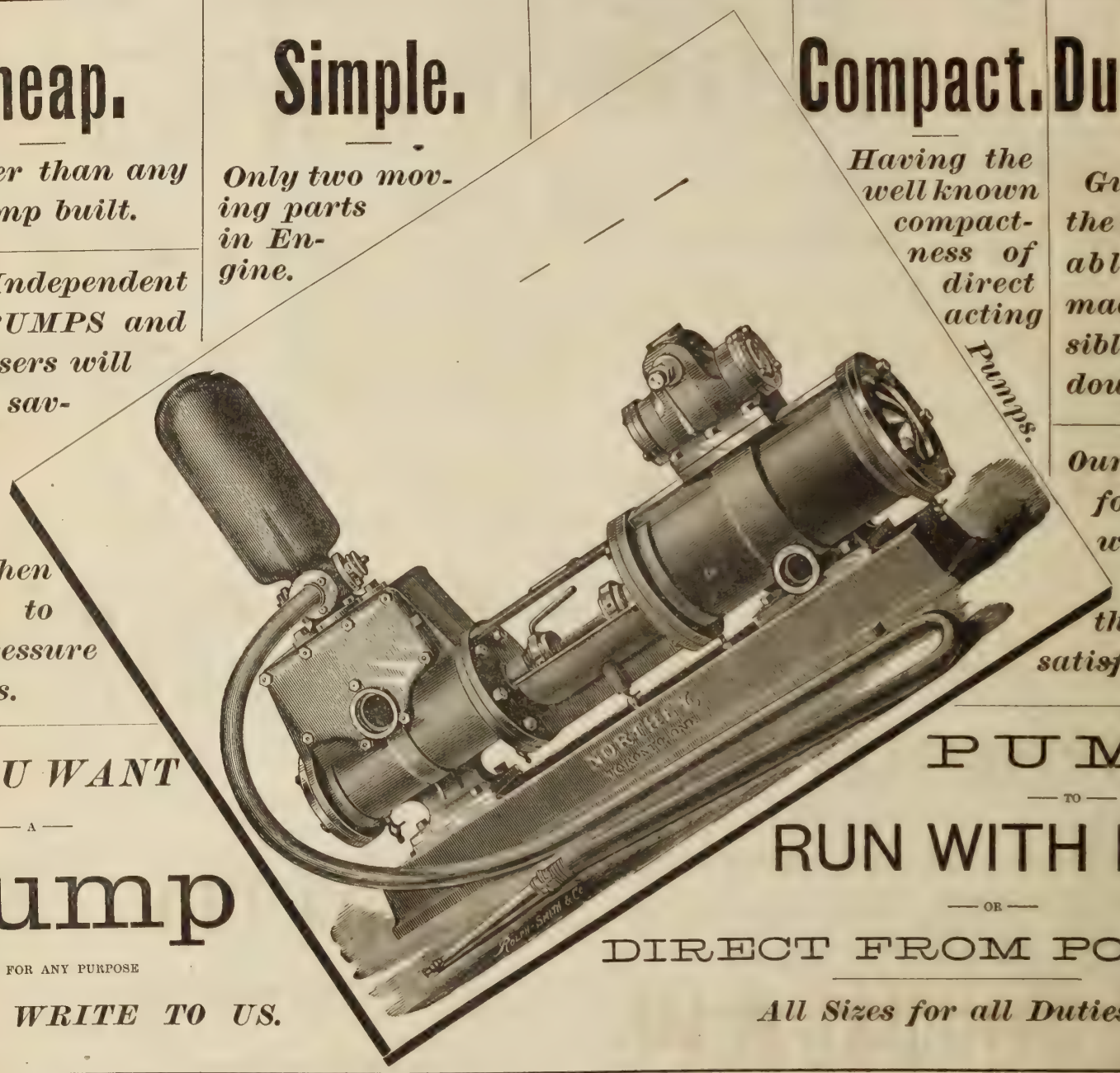
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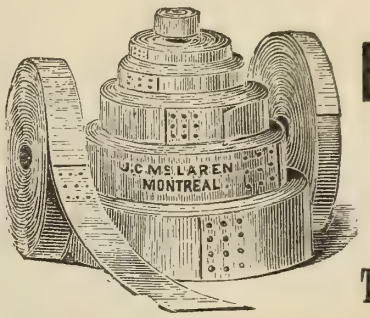
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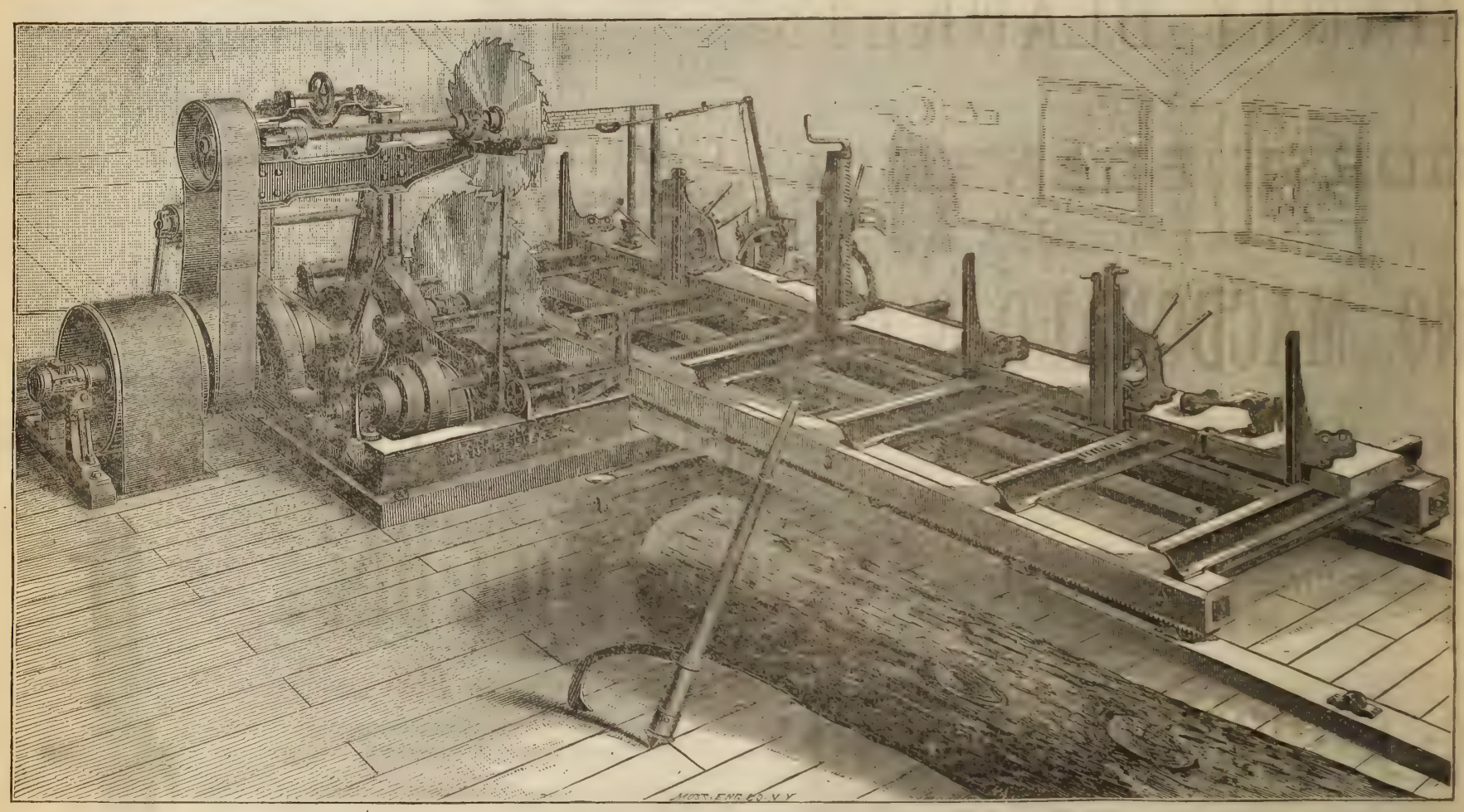
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VOL. 4. PETERBOROUGH, ONT., DECEMBER 1, 1884. NO. 23.

WOOD PRESERVATION.

One of the greediest mouths which the forests of the United States are required to fill is that of the railway demand for ties, bridge timber, etc. According to "Poor's Railway Manual," there were in the United States at the close of 1883, 121,592 miles of railways. The average number of ties needed per mile of track is 2,820, and the duration of a tie averages about six years; hence the annual consumption of ties by all the railways of the country amounts to the stupendous total of 57,148,240. This number of ties represents, at the lowest estimate, 144,203,933 cubic feet of timber, enough to make 1,714,447,700 feet of lumber. At 20 cents a tie, the value of the ties laid yearly foots up $11,429,648. The amount of white pine cut in the Northwest in 1883 was not four and a half times larger than the above figures, a comparison that readily shows how much timber this one branch of the railway industry demands.

It must be borne in mind that we have only given statistics here of the number of ties required for the existing railways, but this large total is being continually increased by the construction of new lines of road, and we have omitted any estimate of the quantity of timber in other forms required for railways, wharves, bridge timbers, etc. etc.

In view of the enormous draft on the forests of the country, it is evident that the time is approaching when scarcity will cause an advance in price. The not remote prospect of such an advance, as well as the present economy of a proper conservative treatment, has induced several railways in the United States to conduct experiments looking towards some feasible means of timber preservation, and the American Institute of Civil Engineers has been for some time past collecting information regarding the various processes for this purpose, with the object of embodying such information in a report to be given to the public. The question of timber preservation is one of national importance, and as it is the aim of this journal to keep its readers informed in regard to everything connected with the lumber interest, we do not think we need to apologize for devoting considerable space to an account of the causes of the short life of timber used by railways, together with a description of some of the methods for its preservation.

There are two principal causes of the destruction of timber in use by railways, namely, decay, and mechanical wear. When wood is exposed to the atmosphere its decay may be considered a species of fermentation set up by the combined action of heat and moisture in the watery and albuminous constituents of the wood, which gradually convert it into *humus*, or rotten wood, this process being at the same time expedited by the presence of numerous boring insects, which take up their abode in the cells of the decaying wood and feed upon its juices.

The object of any national treatment for preserving wood is the coagulation of the albumen by substances capable of effecting this; of these the most effectual, as well as the most practical on account of its low cost, is creosote, which exercises a powerful action in the coagulation of the albumen and is also so destructive to all kinds of insect life as to completely exclude them from any wood which has been treated with it; the presence of a sufficient quantity of creosote in any liquid at once and completely arresting the fermentation for an unlimited time, and destroying all germs of animal and vegetable life.

Of the substances containing creosote the two most important, and in fact the only one available for this purpose, are coal tar and wood tar. When coal tar is distilled in iron vessels there is produced in addition to other substances, as naphtha, etc., about 30 per cent. of the so-called creosote, or dead oil, which has since 1850 been used in continually increasing quantities for this purpose. The quantity of coal used for gas making in Europe is about 10,000,000 tons annually, producing about 5 per cent. of tar, yielding about 155,000 tons of dead oil, the whole of which is available for treating timber. There is also a very large quantity of coal tar produced as a bi-product of the gas manufacture, in the United States, but excepting in a few cases nothing has been done towards utilizing the dead oil contained in it.

The second substance, wood tar, referred to above, is the tar produced by the destructive distillation of wood for the manufacture of charcoal. Considerable quantities of this substance are produced, but as yet it has been only considered as a waste substance or availiable for fuel.

As wood tar contains a large percentage of true creosote, which is entirely absent in the case of coal tar, it is a better preservative of timber than any of the constituents of coal tar, and recent experiments have demonstrated that it may be used by itself for this purpose if forced into the cells of the timber while heated and in a fluid state. Many other substances have been proposed for treating timber, but on account of their cost and the comparatively small quantities produced are not available to any important extent for this purpose.

The method of treatment which is generally considered to be the most thorough, practical and rational, is that which involves first the subjection of the timber in close vessels to the action of high pressure steam for a sufficient length of time to enable the steam to penetrate all the cells of the wood and to vaporize the liquids contained therein, these being afterward removed by a vaccuum pump. After this preparatory treatment the preserving substance is forced into the cells of the wood under powerful pressure, the quantity of this substance being regulated according to the use for which the timber is destined. If simply to be used for bridges or elevated structures the quantity of the preserving substances required is less than for ties, and if for use under water or exposed to the attacks of the teredo the largest amount which can be forced into the wood becomes necessary.

The apparatus needed for tresting timber by this method is simple and comparatively inexpensive. It consists of a cylinder of boiler plate, the size of which depends upon the dimensions of the timber to be treated. This cylinder is made strong enough to resist a pressure of 300 pounds per square inch, and has a track extending for its whole length along the bottom, the ends of the cylinder being closed by strong iron doors, provided with suitable means of rendering them air and water tight. Iron cars, having wheels of small diameter fitting the track on the bottom of cylinder, are provided to carry the timber on ties while under treatment. A steam boiler with vacuum and force pumps, also reservoirs fitted with steam coils for containing and heating the preservative substance are also provided. The operation may be briefly described as follows: After the cars loaded with the timber for treatment are run into the cylinder and the doors closed, steam at about 100 pounds pressure is injected into the cylinder and the supply continued for a length of time depending upon the nature of the wood and its dryness. The steam is then shut off and the vacuum pumps started and kept at work as long as any liquids or vapors are obtained. The vacuum pumps are then stopped and the hot preserving liquid allowed to flow from the reservoir into the cylinder until it is filled. After this the force pumps are started and their action maintained until the pressure in the interior of the cylinder rises to about 200 pounds per square inch, the pressure being maintained at this point until a sufficient quantity of creosote oil or other preservative liquid is forced into the cells of the wood. The force pumps are then shut off and the creosote oil or other liquid contained in the cylinder discharged into a suitable cistern, after which the doors at the ends of the cylinder are opened and the car carrying the timber or ties run out.

When wood has been creosoted in the manner described, paying proper attention to the complete removal of water and juices previous to the injection of the creosote, the density of the wood will be found to have considerably increased, and that its tenacity for holding spikes, etc., as well as its ability to resist mechanical wear has also increased to a very notable extent. One of the sourthern railway constructors stated some time since in a report on this subject that in his opinion (we quote from memory), a soft wood tie properly creosoted is much more valuable, both as regards resistence to decay and to mechanical wear, than the best white oak tie; in fact he considered creosoted soft wood ties worth $1 each for railway use.

One of the principal causes of the rapid destruction of ties from mechanical wear is imperfect road beds, but we think that as ties become less abundant and more valuable more attention will be paid to devices for protecting them from the direct action of the rails, and, as the life of a creosoted tie when exposed to decay alone, is practically unlimited, the advantages of caeosoting will under those circumstances become still more apparent.

The principal item in the cost of preserving is the quantity and cost of the preserving substances. In the case of ties, three gallons of dead oil or of wood tar will be required, while for bridge timbers a smaller quantity will suffice.

The cost of treatment, aside from the cost of the preserving agent, will not in the case of ties vary much from five cents per tie. The cost of dead oil ranges from seven to ten cents per gallon.

Ties for creosoting should be carefully selected, as it is manifestly poor economy to creosote a tie in which decay has already commenced.

The necessity of a most thorough preliminary treatment of the ties for the removal of fermentable substance cannot be too strongly insisted upon, as the value of the subsequent preserving process depends almost wholly upon its proper performance, and its neglect has been the cause of frequent failures in wood-preserving operations. It is not long ago that complaints were made in some European journal that creosoted beech wood ties became rotten in the middle of the tie while the outside for an inch or two in depth remained perfectly sound. The reason for this condition of the tie seems clearly traceable to neglect of a proper preliminary treatment of the tie; the water and juices had been removed from the surface of tie, but not from the interior. Consequently the creosote oil was unable to penetrate that portion of the tie on account of the cells being already filled with water.

We do not wish to be understood in this article as advocating the immediate adoption in all cases of wood-preserving processes, for this will depend largely upon the cost of the ties. In many localities their cost is still so low as to preclude any treatment of this kind, but there are many others in which their cost has already increased beyond the point where creosoting may be profitably employed; the area of such localities is continually increasing, and it needs no prophetic vision to forsee that in the near future the adoption of some preservative process for wood will become universal.—*Northwestern Lumberman.*

LOOSE PULLEYS.

Loose pulleys are among the most troublesome things in a saw mill to keep in order. In the first place they are not always properly designed for the work they have to perform, the same pattern being used for all kinds of duty. When the speeds are high and the belts heavy, the pulleys should be bored and reamed perfectly true; if an ordinary loose pulley be used, the boss should be extended so as to project, say an inch beyond the rim of the pulley; the inside of the boss should be recessed and an oilway cut. The pulley should fit the shaft easily but not loosely, so as to admit of a thin film of oil penetrating between the pulley and the shaft, the object being for the pulley to ride on the oil and not on the shaft. For use in saw benches the loose pulley can with advantage be made of less diameter than the fast, so that the driving belt is relieved from strain when not at work and has time to recover its elasticity; it is usual in this case to make the loose pulley with an inclined flange leading up to the fast pulley to facilitate the shifting of the belt. The oil-hole should in all cases be of ample size, and either a lubricator or a pipe fitted. The lubrication should be carefully attended to, especially when the pulley is new; should it once be allowed to seize it will require re-reaming, or it will be constantly giving trouble. If properly fitted and lubricated cast iron makes an excellent wearing surface; a little fine plumbago introduced into the oil will keep it longer in the bearing, and by filling up the little pores in the iron produces a fine smooth surface. Should the loose pulley be made of less diameter than the tight, the difference should not be great, say not more than 1 in., or in shifting the belt from the loose on to the tight it will become unevenly stretched on the one side and be apt to run out of truth. In many cases it will be found an excellent plan to arrange the loose pulley to run on a sleeve of cast iron. A patent in this direction has been taken out (Davis's patent), of which we hear satisfactory results. In this plan the boss of the loose pulley is somewhat enlarged, and made to revolve on a "sleeve" instead of on the shaft itself. The pulley boss is recessed to form an oil chamber, and the oil is supplied in the usual way through a pipe, and is prevented leaving the bearing by means of a flange fitted to the end of the boss, and by the centrifugal force engendered when the pulley is set in motion, which causes the oil to fly immediately to the largest diameter, which is the working or rubbing face of the sleeve. Tight belts—often too narrow for the work—are a fruitful cause of loose pulleys grinding on the shaft, and getting out of order.—*Timber Trades Journal.*

FILING A CROSS-CUT SAW.

Among the free-hand trades of the woodworkers, is to be noticed that of filing a cross-cut saw. It requires considerable practice to handle a three-square file so as to cut down the worn out teeth and bring an even bevel and to leave all of them with the same pitch on the cutting side of the teeth, with sharp triangular pyramidal points that have their extremities in line with a cutting edge of the saw. It may be important to hold the file exactly in some delicate position as to bring a bevel on the back or front of the tooth so that it will not vary the smallest fraction of a degree; but when we come to notice that these surfaces cannot be very large, especially when three or four teeth are found to the inch, and a depth of cut not far from as many inches in the same number of feet along the cutting edge of the saw, we shall find that a half of one degree is not of so much importance of the smallest fraction of an inch on the the length of the tooth. We have noticed after a saw has been jointed and filed along the edges of each tooth till these two beveled surfaces meet at a beveled edge, with the front bevel left the sharpest, when the saw is to cut the most in one direction, and taken to leave the roots of the the teeth at equal distance from each other, and the pitch of the teeth similar in every respect, that by laying a straight-edge along on the teeth for a small portion of the saw, there is quite a variation in their length, varying much greater than would be found in the depth of cut when the whole depth is divided equally among each of the saw teeth. It may be a good practice to remove the pressure on the file on the return stroke to preserve the cut of the file, but it would be much better to remove the file entirely as soon as the teeth have been gashed out, and to notice the effect of each cut of the file on the saw tooth, and stop at the instant the filing has brought the tooth to a point. And after the best of care has been taken, there remains the third side of the three-sided point to finish up by removing the burr that has been formed on the edges running strictly from the cutting-point. A test with a smooth-faced oil-stone will show at once if the set of the saw is in one straight line. And it would be discouraging if any workman, after he has his filing so nearly completed, should slide a piece of hardened steel, ground on one side to a smooth flat surface, along over the teeth of the saw held squarely with the blade, but it is a good practice, however, as it settles the most prominent teeth, and shows plainly those which should have a little more taken off on the backs to show the cutting edge of each tooth that runs from one side to the highest point on the other, so that each will have an equal part of the cut to perform. Many of the difficulties and troubles of the saw are found in the set of a number of the teeth, a few of them having all the clearance to perform, or those at one end of the saw blade clearing more on one side than on the other, while those on the opposite part of the blade may be reversed and evenly set; and an equal length of tooth traced down to the last atom, has more to do with the cutting of a saw than the back bevel or pitches, except directly at the point, or the spaces at the roots of the saw teeth.—*Boston Journal of Commerce.*

Timber Churches.

The common tradition, says the *Builder*, that the timber of old churches was frequently of chestnut, seems to be exploded by the researches of the French chemist, M. Payen, who procured a large number of pieces for examination, and pronounced that they were not chestnut, added to which, chestnut trees, whatever their abundance in olden times, are now extremely rare. We are told that if letters were drawn upon oak and chestnut planks, by means of pure sulphate of iron dissolved in distilled water, the characters appear at once in black upon the oak and deep violet upon the chestnut, while ammonia produces a short-lived red upon the chestnut, which is much paler and less distinct upon the oak. Another mode of examination is by making sections of the wood, which cannot well be mistaken, as chestnut timber possesses only eccentric layers, while all French and American varieties of oak show the medul lary rays crossing the woody fiber from the center across the circumference.

Encounter with a Bull.

Particulars have reached Dublin of a shocking occurrence near Mullingar, by which two lives were lost. A farmer named Mulvihill was attacked and killed by a young bull, and literally hacked to pieces, his body lying in a pool of blood. During the struggle word was conveyed to the farm of what was taking place, and the servant woman, Mary Moran, about thirty years of age, at once started with a shovel in her hand, and, reaching the field, got between the bull and her master's body, which was still being gored by the infuriated animal. The bull then turned on the brave woman, who used the shovel with all her might. The conflict, however, was of short duration, and a violent blow from the bull's horns threw her violently to the ground. The bull then commenced goring the unfortunate woman's body, until a number of men arrived, when a desperate struggle ensued between them and the beast. Eventually the woman was got away, but she died a few hours afterward from her injuries.

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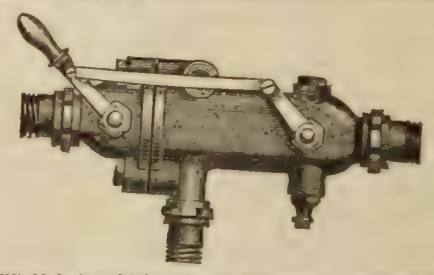
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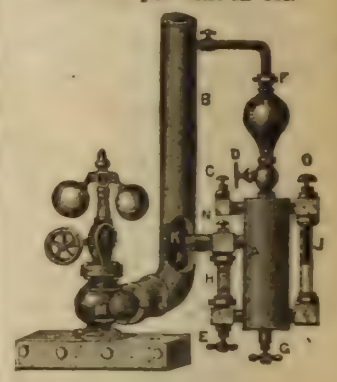
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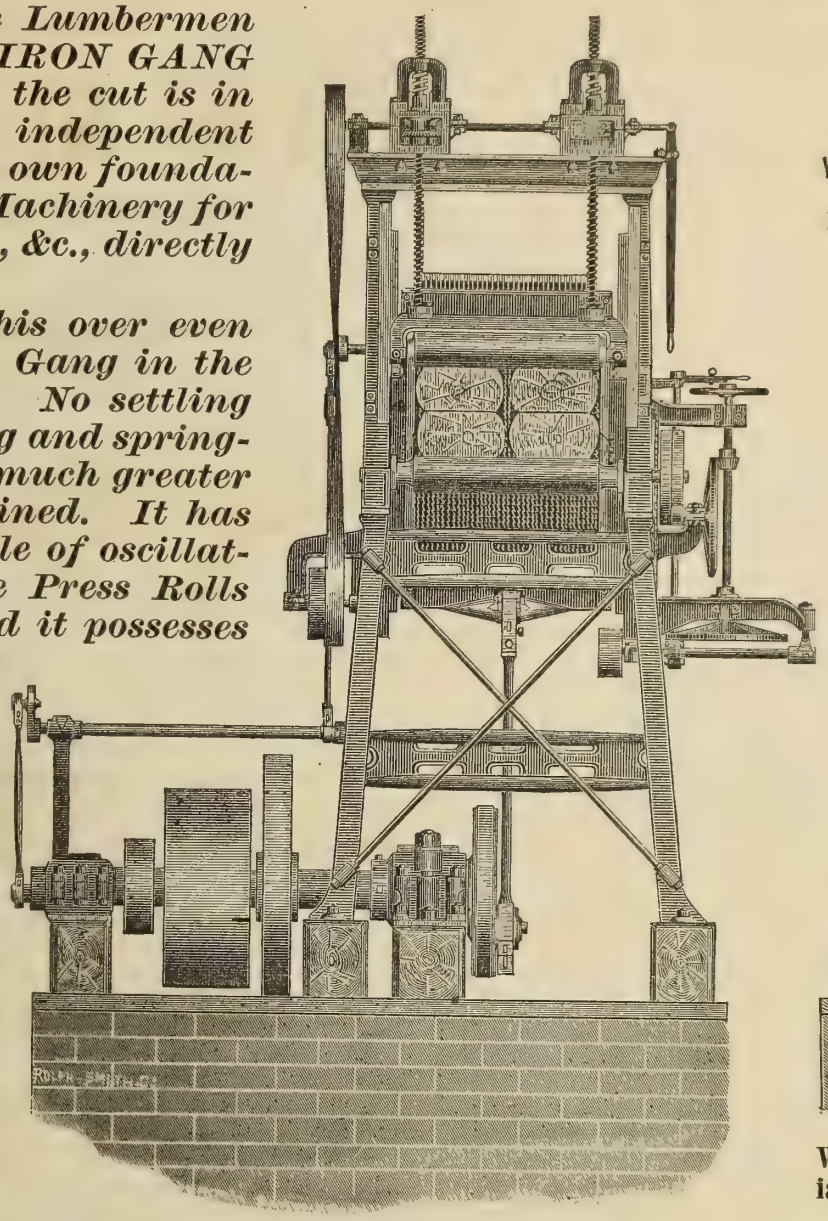
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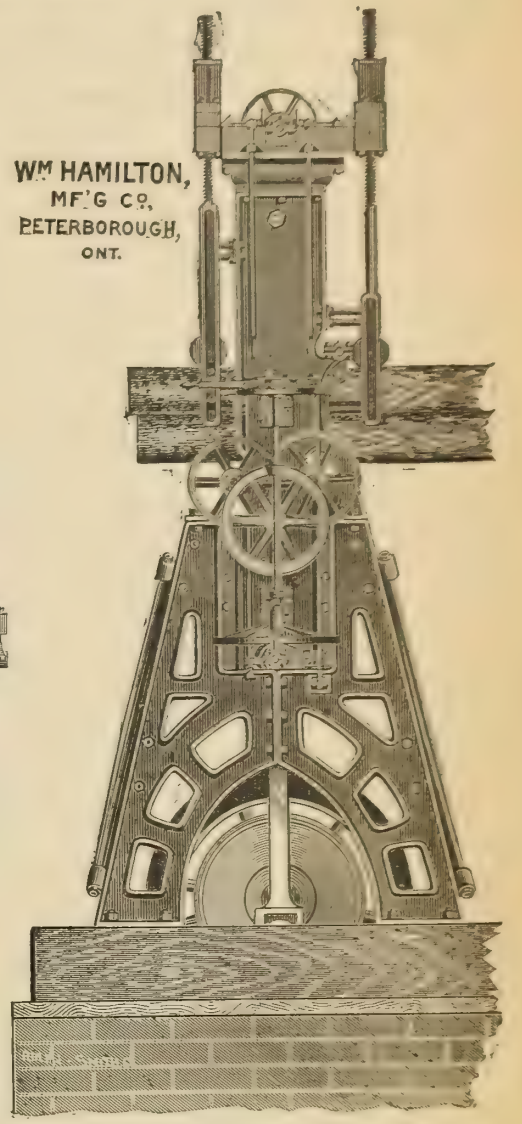
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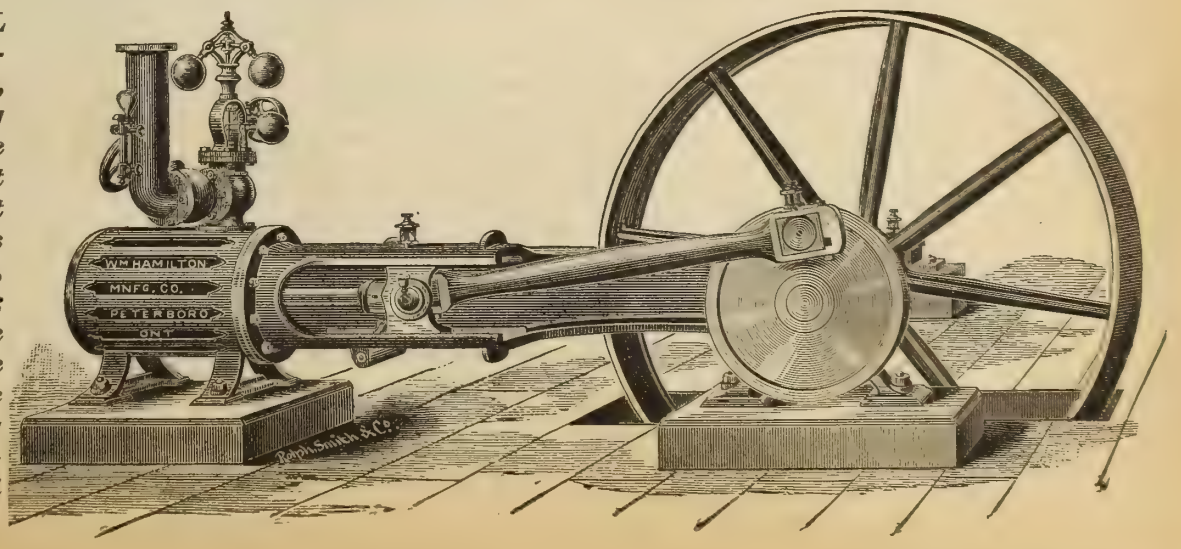
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GENTS,—We are doing big work with the Mill. We recently cut 122 thousand feet of inch Lumber in one day, with the Gang and Large Circular, without any crowding whatever. We are making a steady average of from 90 to 100 thousandfeet per day. I cannot say what amount the Gang is really capable of cutting, as we have not yet been able to stock it to run it at its full capacity. I can, conscientiously recommend the Gang as the best built in Canada. I remain, yours truly, (Signed) WM. THOMPSON, Mill Manager for COOK BROS.

Also, ENGINES and BOILERS.

This cut represents our SAW MILL ENGINE, of which we make the following our Standard sizes, 12x16, 16x20, 18x24, 20x24, and 24x30, built Strong and Substantial for Heavy Work. The Piston Rod, Cross-head Pin, and Wrist Pin, are made heavy and of the best steel; the Connecting Rod has solid ends and is tightened up by screw and wedge, avoiding all danger of keys getting out; the Slide Valve has a simple balance valve, requiring no attention from the Engineer, as it is self-adjusting. The Engine Shaft and Fly Wheel made very heavy. Belt Pulleys put on when required in place of Fly Wheel, and all regulated by the Judson Governor.



WOOD USED FOR TEA BOXES IN INDIA.

Anent the above subject we extract the following from a memorandum by Dr. George Watt, who is on special duty with the revenue and agricultural department of the Government of India :

My views on the subject of woods suitable for tea boxes (which I hope to fully express in the dictionary of the Economic Products of India, now under preparation) are at variance with the popular outcry against our Indian timbers, as injuring the Indian teas. I may therefore be pardoned the liberty of briefly indicating the results of a few personal experiments.

I had the opportunity during the Calcutta International Exhibition of inspecting some 200 tea-box woods from all parts of India. Mr. Manson, the forest officer in charge of these collections, performed, along with me, a large series of Experiments. With four slabs of wood, between each pair of which a sheet of new lead was fastened, we tested the supposed action of the wood. One pair was unseasoned wood, the other the same wood only seasoned. After damping the pairs, they were set aside for a time under circumstances intended to similate the effects of the hold of a ship. In many cases, such as the silk cotton tree (*shimul*) the wood was completely rotten; in others firmly attached to the lead through the growth of a fungus from the decomposition of the wood. Others, such as *toon* wood, seemed perfectly unaffected. In no instance was the lead found to be in ever so slight a degree chemically acted upon. These experiments I repeated once or twice after the close of the exhibition, but failed utterly to discover any wood which seemed to possess the least chemical action upon lead.

That the wood is not the cause of the action seems further indicated by the fact that in China, as in India, a large number of woods are used, and that there does not seem the slightest evidence, neither in India nor in China, that any of these woods has as yet been shown by experience to corrode the lead. If the question were merely one of flavor imparted to the tea, one would expect the pine wood used in China to stand first in this respect ; but what is complained of is the chemical decomposition of the lead lining, and the cause of this might readily enough be determined by chemical analysis of the tea so destroyed, compared with a chemical examination of the fresh wood used for the boxes, and chemical experiments with various actions upon the lead of the compounds formed from the fermentation of tea. The presence of any active principle among the tea which belonged to the wood would prove my explanation to be incorrect ; while the establishment definitely of the peculiar compounds from tea which possess the corroding power would lay the foundation of a complete solution of the difficulty. The preparation of tea upon a scientific seems a not very distant future.—*English Ex.*

DRY KILNS.

The following description of Messrs. Rathbun & Co.'s dry kilns is given by the Deseronto *Tribune* :—

One of the greatest improvements made by "The Rathbun Company" during the past few months, has been the erection of three of the celebrated "Chicago Lumber Kilns." They have been constructed in the most thorough manner, every detail being carefully looked to, and the result is that they now have the most complete structurea for the purpose ever erected in Canada or the United States. They are located upon the factory yard, at the west end of the village, and the large draft chimneys, seventy-five feet high, capped with handsome iron roofs, can be seen for a long distance, from all directions, and are a very prominent object when approaching from the bay, and the source of many inquiries from visitors, as to what they are, and their purpose.

The constantly increasing demand for dry lumber induced "The Rathbun Company" to make these improvements, and now that they are completed, and working, it will enable them to supply large quantities of perfectly dry flooring, siding, &c., &c., besides increasing the manufacture of doors, mouldings, and other sash factory products. Each kiln is eighteen feet wide by seventy feet long, and will hold forty thousand feet B. M. of lumber. The heat is generated by superheated steam, which circulates through about one mile of one inch iron pipe, and by a system of draft doors and dampers, the temperature can be regulated as required from 150° to 200° Fahrinheit. To prevent checking of lumber, or drying too fast on the outside, which has been a serious objection to former kilns, there are numerous small jets of steam introduced directly into the lumber chamber, which serve to keep the air moist, and the surface of the lumber in such a condition as to dry it much more perfectly than by any former method.

In connection with the kilns, and separated from them by the firewood, is a fine brick building, size twenty by fifty feet, containing two boilers, with superheaters, set with "The Jarvis Furnace," so constructed as to burn wet refuse, sawdust wood, etc., just as it comes from the saw mill, and with a most complete arrangement for dumping the fuel directly from the mill cars to the furnace doors. These boilers not only supply steam for the dry kilns, but also heat the entire sash and door factory, the steam being conducted to it through a two inch iron pipe a distance of two hundred and fifty feet. There is also in the boiler house a powerful steam pump, with hose constantly attached for use in case of fire, which can at any time be started at short notice, and will prove a great fire protection for that end of the village. The whole is connected with the main line of "The Bay of Quite Railway," by a complete system of tracks, that enables the lumber and fuel to be easily, quickly, and cheaply handled, and does away with labor of several horses and carts. We understand that there are other improvements projected, which will put this important branch of "The Rathbun Company's" business, in a position second to none, but as winter is now upon us, we presume nothing further will be done until another season opens. Such improvements are a benefit and a credit to the place, and are a substantial prosf of the enterprise of "The Rathbun Company."

LUMBER CHUTES ON THE CALIFORNIA COAST.

In the *Milling and Scientific Press* of November 1, published at San Francisco, is a lengthy article, with illustration, on a novel method of loading lumber adopted at various points along the coast. The following is a condensation of the article :

The shore line of the west coast of the United States has very few good harbors. Between San Francisco and the Straits of Fuca, some 700 miles, there is really not a single harbor which is always accessible during gales. There are a number of open roadsteads, giving partial shelter from the summer Northwest winds, and several bar harbors, all of which are dangerous of access and utterly impracticable in heavy or even moderately bad weather.

For nearly the whole length of the northern coast, the immense forests, extending back for miles from the shore furnish employment for labor and investment for capital. At every available point for shipment stands a saw mill, turning trees into lumber which is sent here by sea and thence distributed. Every little river has its fisheries and canneries, and all the valleys and bottom lands their agricultural population.

The produce is mainly shipped by sea and under the peculiar existing conditions the people have had to devise means to overcome the natural disadvantages of the coast line. From these necessities has grown up the "chute system," of loading and discharging vessels.

Most of these chutes are on the coast north of San Francisco, although there are a few on the south coast also. They consist of a long incline of wood in the form of a shallow trough, extending from a headland of a shipping point, or from a high wharf or pier, out to a point where water is deep enough to allow vessels to come under and load, and are suspended from shears resting on the headland and piers. Of course, no average can be given of their length, size, cost of construction, or length of shears. These items all depend on the location and conformation of the coast. In some cases they are 60 feet long, as when used from a wharf or pier, and in others 600 feet or more. The length depends entirely upon the vertical height from sea-level, to the point from which the lumber is started. There must be inclination enough for lumber to slide by its own weight, and yet not so much that its impetus would be too great. Nor part of the structure ever touches the vessel, except by accident, but the whole thing is suspended from the various shears of supports, and the outer end or apon is raised or lowered to suit the stage of the tide, height of vessel, and weight of lumber, according as it is light or heavy. In stormy weather they are, of course, hoisted high in the shears.

The engraving which accompanied this article in the San Francisco paper was made from a photograph of Rockport chute, Mendocino county, formerly known as Cottanueve, a landing only considered available for six months in the year, and by no means the best on the coast at any time. An isolated rock off the bach, which was so precipitous and pointed as to have a foothold at its pinnicale for only one man to work at first, has been cut down until it presents a surface available for storing over 200,000 feet of lumber. From this rock to another nearer shore has been stretched a wire suspension bridge, costing over $13,000, and the horse cars bringing lumber from the mill come on trestle work the bridge, and cross it to the other rock. The chute comes down from the outer rock, where the lumber is piled. There are guys, stays and braces to steady the chute, and regulate the inclination as well.

There is no other part of the world where this chute system is in vogue. They are built on all sorts of places along the coast. The extreme edge of a headland or point is often selected on account of depth of water. The ocean surf is constantly rolling in, and even behind many of the small points or headlands there is a heavy swell. In many places the insurance men refuse to take risks on the vessels on account of the danger of loss.—*Northwestern Lumberman.*

REDWOOD.

In a recent interview with the representative of the California Redwood Company, who is now in this country, we gleaned some remarkable details about this new and interesting wood. The trees, especially those of a large size and toward the butts, are like the firs and pines ring or cup and star shaken ; but, as the secretionary matter which forms the heartwood is devoid of resin, the faults, shakes, or fractures are clear and open. In this detail they form a strong contrast to the pitch pine, or southern pine, in which these shakes are the lodgment of large quantities of resin. Again, the wood cut from the butts is specifically heavier than that from the upper part, and when thrown into the water will sometimes sink at the butts and lift clear out of the water at the tops. This remarkable phenomenon appears to be owing to the saturation from the ground by water, for the butts upon being cut and dried resemble the wood of the upper part in every respect.

The durability of this wood seems remarkable, proof of which is found in fallen trees in the wood being grown over, and spanned or grasped by other and large trees. In walking upon these prostrate logs, the bark and sapwood is so rotten that the feet sink in it like walking on snow ; but the heartwood is found to be perfectly sound. These logs from being saturated with water, by contact with the ground, will not float in the water. The wood of these long-fallen trees is equally as good as that of the standing ones, but somewhat more dark in color. In dealing with these logs they cross-cut them in lengths, and elevate them above the ground to dry ; in two or three years they will be sufficiently dry to float.

The pine (Oregon pine) and the spruce are common in these redwood forests, but the fallen trees of these woods rapidly rot, and are consequently worthless for commercial purposes.

These redwood trees, although evergreen, resembling our yews, admit of an undergrowth, through which it is impossible with an axe to force a away. This is curious, for our yews groves admit of no undergrowth, not even a blade of grass. This fact in connection with these redwood trees is no doubt traceable to the enormous height of the foliage above the ground ; it admits of an atmosphere, although to large extent devoid of light, in which an undergrowth can exist. The atmosphere of these woods is cold and damp when the outer air, exposed to the sun, is hot and dry.

This redwood, from its non-resinous character, is unsuitable for burning. In the standing tree this is so marked that forest fires are unknown. —*Timber Trades Journal.*

DECEPTIVE CIGAR BOXES.

A little package of cigar box lumber, says an exchange, comes to us from the Phœnix Lumber Company, Milwaukee, that in some respects is of considerable interest. One piece is Spanish cedar veneered on poplar, and another most men would say was cedar, providing they saw but one side of it. Turned over, and it is plainly basswood. This imitation of cedar is a patent process, we understand. Many a smoker is not so expert that he can judge of a cigar on its merits, but depends much on the appearance of the box out of which it is taken. If he thinks the box is cedar, he takes it for granted that the cigar is not a bad one. Here is where he is liable to be deceived, and in this regard an imitation cedar box acts as a deceptive agent. What he takes for a Spanish cedar box may be pure basswood.

It is stated that the saw mill building at the New Orleans, La., exposition has been completed. It is 600 feet long, and 40 saw mills are located in the building. If the arrangements for securing a reasonable supply of logs are such as were promised there will be an opportunity for a competitive display of saw mills and accessary machinery and appliances such as has never before been afforded.

"Frailty, thy Name is Woman."

Hamlet.

That she is frail often in body,
"'Tis true, 'tis true 'tis a pity
And pity 'tis, 'tis true."

Dr. Pierce's Favorite Prescription is the best restorative tonic for physical frailty in women or female weakness or derangements. By druggists. Price reduced to one dollar.

LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on Nov. 1st, 1883 and 1884, and also the Consumption for the month of Oct. 1883 and 1884 :—

	Stock, Nov. 1st. 1884.	*Stock, Nov. 1st. 1883.*	*Consumption for the month of Oct., 1883.*	*Consumption for the month of Oct., 1884.*
Quebec Square Pine	345,000 ft.	406,000 ft.	258,000 ft.	348,000 ft.
" Waney Board	529,000 "	801,000 "		
St. John Pine	33,000 "	59,000 "	30,000 "	34,000 "
Other Ports Pine	70,000 "	80,000 "	6,000 "	[illegible] "
Red Pine	58,000 "	64,000 "	2,000 "	9,000 "
Pitch Pine, hewn	548,000 "	309,000 "	58,000 "	10[illegible],000 "
" Sawn	432,000 "	475,000 "	123,000 "	204,000 "
Planks	55,000 "	68,000 "	13,000 "	4,000 "
Dantzic, &c., Fir	99,000 "	113,000 "	49,000 "	38,000 "
Sweden and Norway Fir	70,000 "	69,000 "	47,000 "	1[illegible],000 "
Oak, Canadian and American	262,000 "	312,000 "	89,000 "	129,000 "
" Planks	182,000 "	179,000 "	57,000 "	37,000 "
" Baltic	9,000 "	21,000 "	0,000 "	0,000 "
Elm	36,000 "	25,000 "	12,000 "	20,000 "
Ash	36,000 "	25,000 "	14,000 "	7,000 "
Birch	73,000 "	162,000 "	66,000 "	67,000 "
East India Teak	38,000 "	39,000 "	83,000 "	9,000 "
Greenheart	31,000 "	109,000 "	5,000 "	[illegible],000 "
N. B. & N. S. Spruce Deals	31,897 stds.	23,204 stds.	6,815 stds.	9,482 stds.
" Pine	1,160 "	1,095 "		
Quebec Pine & Spruce Deals	10,269 "	8,848 "	2,383 "	3,561 "
Baltic Red Deals, &c.	8,701 "	5,597 "	887 "	1,589 "
Baltic Boards	40 "	291 "	27 "	81 "
" prepared Flooring	2,975 "	3,651 "	894 "	716 "

WOODEN WATER PIPE.

Respecting the durability of wooden water pipe, a member of the Engineers' Club, of Philadelphia, said: "The section of spruce was originally about 14 inches in dimater at the large end and somewhat smaller at the other, having a rot iron band about 1½ in. wide, ⅜ in. thick at one end and tapering to a thin edge at the other, so that it could be driven on or into the end of the log near the outer circumference. A piece of iron pipe 4 in. internal diameter and about 12 inches long, tapered to a thin edge at each end, served to connect the ends of the two adjoining logs, which were driven over it end to end, and prevented from splitting by the iron bands around the ends of the logs. In some cases no interior iron coupling pipe was used; one log was tapered at one end and driven into the next one, which was prevented from splitting by the exterior iron band. The 4 in. pipes, so far found, were of yellow pine, spruce, and oak, of about 12 feet lengths, and from 12 to 24 feet in diameter, and supposed to have been laid between 1795 and 1805; the depth at which they were found varied from 2 to 8 feet below the surface of the street. The outer bark and heartwood of the spruce logs were generally sound, while the inner bark and sapwood were decayed, except where the soil was dry, gravelly or porous, when the greater part of the wood was decayed and the iron badly corroded. A specimen of red oak from a log adjoining the spruce one was decayed on the under side, but other portions looked nearly as fresh as if recently laid.

THE BAMBOO.

There is a class of plants which gives a peculiar character to most Indian forests, and this is the bamboo. They are tall arborescent grasses, generally growing in dense clumps, consisting of numerous slender stems, often 60 feet high and more. The stems are hollow, light, and very strong, and they furnish most valuable material for building; but they are also used to make baskets and mats, and the walls, floors, and even the roofs of houses are often made of stout bamboo matting. The demand for bamboos is very large, many millions being annually floated down from the Burmah forests, and they are exported from most of the larger forest districts in India. Only in some remote districts are the bamboos as yet without value. A project was started a few years ago to use the fresh shoots of the bamboo for the manufacture of paper, and extensive concessions were made by Government to the promoters of this project. Excellent paper from bamboo is made in China, and there seems no doubt that fresh bamboo shoots yield one of the most valuable of paper stuffs. But in most districts the stems fetch much more when mature than the papermaker could afford to pay for the fresh shoots, and in those remote districts where bamboos have as yet no value the unhealthiness of the forests, the scarcity of labor, and other difficulties are in the way of this undertaking.

New Mills at Port Arthur.

The Port Arthur Boom Slide and Lumbering Company, in which Messrs. Commee and Thompson are the principal stockholders, propose to assist in keeping up the boom in Port Arthur by erecting a large saw mill on their water lot adjoining Geo. A. Priest & Co.'s planing mill. The mill will have a cutting capacity of 50,000 feet per day, and will be fitted up with the best and most approved machinery. The company have already contracted for the delivery here of 5,000,000 feet of logs and in fact they would have had some on the spot already had it not been for the obstructions previously in Pine river, where the logs are being obtained. It is believed a number of new mills and factories will go up next summer along the water front.—*Sentinel.*

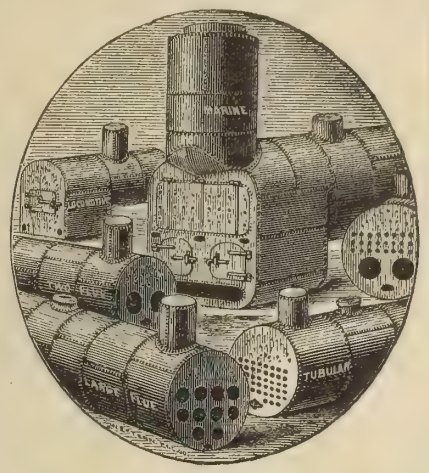
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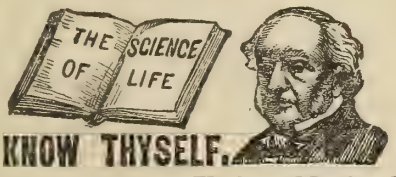
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This book should be read by the young for instruction, and the afflicted for relief. It will benefit all. —*London Lancet.*

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Advertisements intended for insertion in any particular issue should reach the office of publication at least four clear days before the day of publication, to insure insertion

All communications, orders and remittances should be addressed and made payable to THE PETERBOROUGH REVIEW PRINTING AND PUBLISHING COMPANY (LIMITED), Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & CO., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., DEC. 1, 1884.

AMASA HOWE is rebuilding his shingle mill recently burned at Fort Fairfield, Me.

A NEW steam mill for the manufacture of short lumber will be built at Atkinson, Me.

A NEW mill will shortly be established by Messrs. Lee & McTavish at Rapid City, N. W. T.

JAMES FOWLER'S saw mill, near Sheridan, Mich., was burned Nov. 7th, causing a loss of $12,000.

THE Cummer Lumber Company will put a passenger coast on its logging railroad running north from Cadillac, Mich.

THE schooner Plowboy left Toronto Nov. 1st, bound for Charlotte, N. Y., but had to put into Port Dalhousie with the loss of her deck load of timber.

THE Alberta, N. W. T., Lumber Company have had supplementary letters patent issued to them authorizing an increase of their capital to a million and a half.

OTTAWA lumbermen say that the season was the most favorable one for sawing operations, and that the cut will amount to about the same as last year.

IT is the intention of the Rainy Lake Lumber Co. to build a planing mill on the north side of Lawrenson's creek. It is to be completed before the spring.

OAK pillars, it is admitted by architects and builders, are better supports for a building in case of fire than iron, owing to the liability of the latter tc warp and give way from heat.

IT is said that there is a skating rink floor in Indianapolis made of paper lumber. The boards are laid edgewise, and the surface sandpapered smooth. It is comparatively noiseless.

WORLD'S INDUSTRIAL EXPOSITION.

The World's Industrial and Cotton Centennial Exposition was inaugurated by a resolution of the National Cotton Planters' Association of American at its annual meeting in October, 1882. The original intention was to designate it simply "The World's Cotton Centennial," the year 1884 being the centennial anniversary of one of the great commercial events of America —the first exportation of cotton from the same; but subsequently this comparatively limited intention was abandoned, and the scope of the enterprise was extended by making it "The Word's Industrial and Cotton Centennial Exposition," thus imparting to it both a national and international character, which decision was more emphatically confirmed by an act of the United States Congress and by proclamation of the President to the whole world.

In accordance with the provisions of the act of Congress the location of the exposition was fixed at New Orleans and ample funds were at once provided for the same. The United States Government will expend $300,000 for its collective exhibit, and $1,000,000 was loaned by the Government to the enterprise; $100,000 was appropriated by the city of New Orleans, $100,000 by the State of Louisiana, and $500,000 was subscribed by the citizens of the city of New Orleans.

The classification of the exhibits will comprise the following groups :—1, argriculture; 2, horticnlture; 3, raw and manufactured products, ores, minerals and woods; 4, furniture and accessories; 5, textile fabrics, clothing and accessories; 6, the industrial arts; 7, alimentary products; 8, education and instruction; 9, works of art; 10, pisciculture. These ten groups have been divided into 1,006 classes. In addition to these will be a number of other special and interesting departments.

Water, gas and steam, and other motive power for machinery will be supplied gratuitously. Neither American or foreign exhibits will have to pay rent for the space allotted them in the exposition, but a reasonable entrance fee, suitable to the character of the exhibit offered, will be charged to the exhibitors of the United States.

The buildings and grounds devoted to the purpose of the exposition will be of ample capacity, and will embrace all the improvements and facilities suggested by the experience of previous expositions of a similar capacity. There has been erected five principal buildings.

In addition to the other great structures will be 40 saw mills in constant operation, enormous and elegant accommodations for live stock; costly and imposing structures of various manufacturing concerns, and two magnificent buildings erected by the Republic of Mexico at a cost of half a million of dollars. This Republic will maintain a distinct exhibit, and have quartered on the grounds during the entire exposition a battalion of infantry and one caval ry with the two principal bands of the same. This will be an attractive featnre.

The exposition being under the joint anspices of the United States government, the city of New Orleans and National Cotton Planters' Association of America, it will be formerly opened on Tuesday, the 16th day of December next by the President of the United States, assisted by his cabinet officers, the Conress, governors of the various states, and President Diaz, of the Republic of Mexico. A formal and urgent invitation to assist in these exercises has been extended to his Excellency the Marquis of Landsdowne and his cabinet ministers. The inauguration exercises will be conducted upon an elaborate and appropriate scale.

THE Pioneer Lumber Company of Eau Claire, Wisconsin, has failed with liabilities amount ng to $250,000. Two years ago the company suffered the loss of their valuable mill by fire, and it also was one of the heaviest sufferers by the flood this year.

THERE is now every reason to believe that Mr. Peter McLaren, the well known lumberman of Perth, intends extending his business to Brockville. His agent was in that town securing leases for two yards, one on the corner of Perth and Brock streets and the other on the corner of Brock and John.

REVIEW OF THE LUMBER TRADE DURING THE PAST SEASON.

The Quebec *Chronicle* says :—The lumber and timber trade of the port, we learn, has been again in most respects unprofitable to all concerned. Our shippers had to face one of the most gloomy winters in England that can be remembered in the history of the trade, and the amount of stuff sold was very much lighter than usual, especially in white pine timber, which, owing to the depressed state of ship building had almost gone out of consumption. In the face of this a considerable quantity of square timber was made up the Ottawa, augmented to some extent by a very favorable winter, and this supply coming on a market already overstocked created a depression throughout the year which has told seriously against the producer and has not benefitted the shipper. Very little new timber changed hands early in the season; with the exception of a few small average rafts which were forced upon the market, and these were sold at large reduction on the previous year's prices. A little later on in the season we heard of a few operations in a better class of rafts, but on the whole the business was very light, and a large bulk of stock now wintering over is in the hands of the lumbermen. We are glad, however, to learn that the production on the Ottawa this season is likely to be very much smaller than usual, and it is said by those well informed that it will not exceed a million and a half. If this is realized it will tend greatly to strengthen the value of Ottawa pine in this market next season, but nothing short of a cessation of production will bring about this improvement. In hardwoods values have changed very little with the exception of oak, which has been dull of sale during the year, and concessions have ultimately had to be made to force sales. We hear the production of this wood is not likely to be large, and as most of the beft parcels are now in the hands of shippers we may possibly see the value of this wood maintained, but in this as in other articles much depended upon the quantity produced. Deals have been in fair request all year especially the higher grades, 3rds and 4ths being less saleable, but the stocks wintering over will be lighter than have been known for very many years. The season just closed has been one of the lightest on record as regards the volume of shipments, and owing to the very high rate of ocean insurance it has now almost become prohibitory to ship in sailing vessels late in the year. Very few sailing ships came out on their second voyages compared with previous years, and the amount of tonnage short is about 124,000 tons. This it is to be hoped will give relief to the home markets and create a healthier state of things there and may in this way assist the coming year's business, but unless things are kept in a very moderate compass the trade will undoubtedly be depressed for a much longer period. The stocks wintering over at this port have not yet been made up, but will be seen as usual in the annual statement of Messrs. Forsyth when issued.

FREIGHTS.

In 1881 there was a deficiency in sailing tonnage as compared with 1880 of about 200,000 tons in round numbers, and this deficiency has not since been made up. This year there is again a deficiency on last year as follows :—

SAILING VESSELS.

1883	627 vessels	504,962 tons
1884	499 "	380,147 "
Less	128 "	124,815 "

In ocean steamers there was an increase last year of about 95,000 tons. This year there is decrease of about 25,000 tons as follows:

1883	269 strs.	451,509 tons.
1884	239 "	425,531 "
Less	30 "	25,978 "

Freights ruled dull and low throughout the whole season with a little stiffening towards the end of June and at the close of the season. It is seldom that we see so few ships in port after the middle of October as we had this year, but shipments were so light that no more were wanted and freights remained on a dull level throughout. Large quantities of deals were carried by steamers, both the regular lines and outsiders, a business which is fast concentrating at Montreal, and for the first time, we believe, steamers actually loaded square timber or what is equal thereto in Montreal. It is a pity to see our shipping business gradually drifting from us in this way, and it might be supposed that the rules and regulations of the Ship Laborers' Society, which are said to be the cause, would be revised and amended and brought more into accordance with the interests of the port and the views of the ship-owners, particularly as we are given to understand there is no objection made to the actual rate of wages.

The following is a statement of prices current during the season :—

	Timber.	*Deals.*
MAY.		
Liverpool	20s.	
Greenock	20s.	
Steam :—Montreal to London.		47s. 6d., 45s.
Three Rivers to Glasgow		40s.
Range of Ports West Coast	18s., 20s.	
Steam :—London toLiverpool.		50s.
Greenock	17s. 6d.	
Drogheda	25s.	55s.
Lisbon		55s.
Bristol	20s.	
JUNE.		
Liverpool	20s., 21s.	55s.
London	22s. 3d., 22s. 6d.	55s.
Hull and Grinsby		55s.
Greenock	20s., 17s. 18s. 9d., 18s. 6d.	
Belfast	20s.	
Aberdeen	24s.	60s.
Glasgow		55s.
Three Rivers to London		55s.
Saguenay, Metis, Mantane or Rimouski to London		52s. 6d. 55s.
Do to Sligo		60s.
Do to Marseilles		60s.
East Coast England	22s. 6d.	55s.
Chatham and Sherness	20s.	55s.
Steam :—To Sunderland (ss. "Acton"	20s.	50s.
Montreal to London		50s.
Montreal to River Platte	$13@14 p.m.	
Steam :—To Liverpool		45s.
Newcastle	22s. 6d.	55s.
Sunderland, Hull or Hartlepool	22s. 6d.	55s.
JULY.		
Liverpool { Pine / Hardwood	21s. / 22s. 3d.	
Greenock	18s. 6d,, 18s.	
Range Ports East Coast	23s.	55s.
London	22s.	52s. 6d., 55s.
Clyde	18s. 6d	
Montreal to West Coast		52s. 6d.
Cardiff	19s.	
Chatham or Sheerness	23s.	56s.
Sunderland	20s. 6d., 21s.	
Plymouth		65s.
Liverpool	20s. 6d.	
Waterford	21s.	50s.
AUGUST.		
London	220. 6d.	52s. 6d., 55s.
Liverpool	20s. 6d.	
Quebec to River Platte	$13 per 1,000 ft. B, M.	
Greenock	18s. 6d., 19s.	
Bristol	21s.	
Sligo		62s. 6d.
Steam :—Three Rivers to Liverpoal		50s.
Do. Montreal to Liverpool		50s.
Cardiff	20s,	
SEPTEMBER.		
Cork	22s. 6d.	55s.
Liverpool	20s.	
Greenock	20s.	
Steam :—Montreal to London		50s.
(Longitudinal sleepers)		60s.
London	22s.	50s., 52s. 6d. 47s. 6d.
OCTOBER.		
Fleetwood	23s.	52s. 6d.
East Coast	20s.	47s. 3d.
Cape Town (staves)	£5 (deals & boards)	£5

Gum as a Disease.

Dr. Beyrinck, a distinguished Dutch naturalist, has been investigating the origin of the masses of gum collecting on the limbs of certain kinds of trees, notably the plumb and apricot. He finds that the exudation is due to a disease produced by the presence of parasitic fungi, and when healthy trees are inoculated with the gum thus produced they speedily contract the disorder, which is highly contagious. The disease disseminated by the drying of the gum by oxidation and its circulation in the wind, which thus wafts the germs for many rods, so that one diseased tree may infect a whole plantation.

ST. CATHARINES SAW WORKS!



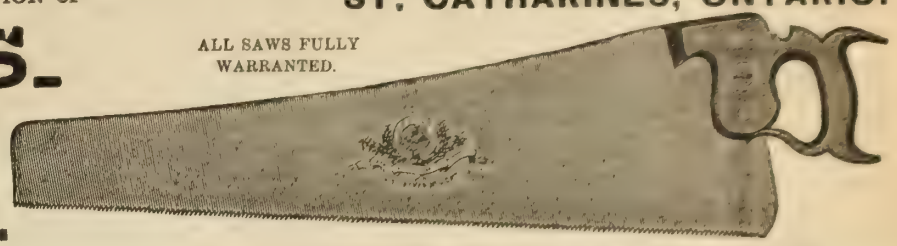
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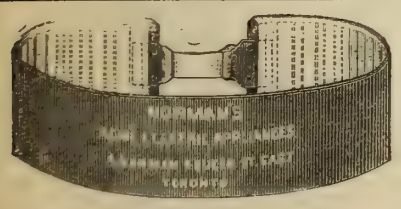
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4 QUEEN STREET EAST, TORONTO.

NERVOUS DEBILITY, Rheumatism, Lame Back, Neuralgia, Paralysis and all Liver and Chest Complaints immediately relieved and permanently cured by using these BELTS, BANDS, AND INSOLES.
Circulars and Consultation FREE.

A FEW SIMPLE TESTIMONIALS THAT SPEAK FOR THEMSELVES.

OTTAWA, September 3rd, 1883.

A. NORMAN, ESQ.—Dear Sir,—I have experienced considerable benefit from your appliances. I feel stronger and better every day.
Yours truly, R. E. HALIBURTON.

PETERBOROUGH, October 15, 1883

A. NORMAN.—Dear Sir,—Soon after I commenced to use your Electric Appliances, they opened my bowels, cured my cough and cold, relieved my head and considerably relieved my catarrh in consequence. The discharge from my head and chest are now easy, and I feel altogether better. My digestion has improved, my stomach less sour and windy, and I am less troubled with lascivious and vivid dreams. I had previously tried almost all the advertised patent medicines without deriving any good.
Yours truly, J. GREEN.

CURATIVE BATHS, Electric, Vapor, Sulphur and hot and cold Baths. Baths have been admitted in all ages by every school of medicine, to be one of the best means of curing ailments, maladies and diseases. The Electric Bath is the latest and best discovery in this line. Come and try them, at
4 Queen St. East Toronto.
L14-1y A. NORMAN, Proprietor.

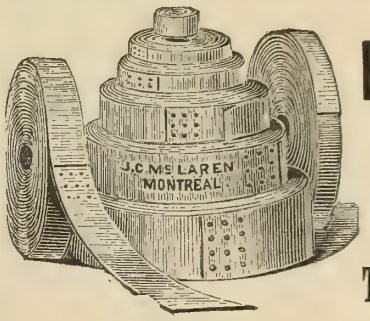


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A PRIZE. Send six cents for postage and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All, of either sex, from first hour. The broad road to fortune opens before the workers, absolutely sure. Address TRUE & Co., Augusta, Maine

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SAW MILL DOGS

The Sawyer's Favorite

For Holding Logs upon a Saw Mill Carriage while being Sawn into Lumber.

These Mfilldogs I guarantee to give satisfaction in every case. They will hold a frozen log as well as a soft one, for cutting Scantling, Square Timber, &c. These Cants cannot be excelled, I sell them all on their own merits, give ten or fifteen days trial, and then, if not satisfactory, return them to my order, as I have no agents on the road this year, I will sell them at a reduced price. Send for Circular and price list.



EXCELSIOR DOG.

Manufactured by HUGH GIBSON, CHATHAM.

GRAY NO MORE HAIR.

Grayline; the Great Hair Restorer and Renewer, changes *gray hair* to its natural color gradually and permanently. Not a dye. A marvellous invention. Gray-haired persons, old men and odd women made to look young in three weeks. No more gray hair. Also grows hair rapidly and luxuriantly. Send for descriptive book, and testimonials and opinions of eminent chemists and doctors, etc., who recommend it highly. Address, **J. H. NICHOLSON, 7 Murray St., New York.** d64w38L1

DESERONTO.

The output at the cedar mill during the month of October, says the *Tribune*, exceeded that of any previous month in its history, when we consider the stock used and amount of machinery in operation. The following is a list of different kinds of lumber manufactured during the month, and amounts of the same cut :—Railroad ties, 3,360 pieces, 8x10 in. post, 11,194 ; shingles, 2,231,250 ; heading, 66,000 ; cedar, 16 in., 16,200 ; joisting and dimension timber, 549,700 feet B. M. ; 1¼ lath 4,297,600 pieces ; saw logs, 2,180 pieces ; floats, 458 ; square timber, 329 ; paving blocks, 67 car loads ; 18 in. wood, 907 car loads ; 4 in. wood, 491 cords. Shipment from this department have been lively all season, particularly by rail during the construction of the N. T. & Q. Railway. A great number of car loads of ties, posts, telegraph poles, culvert and bridge timber, material for station, section and coal houses, were shipped from the mill, and this, with numerous orders from the Grand Trunk and other lines, made the past season more lively than ever heretofore. The convenience afforded by the Bay of Quite railway is greatly in favor of this mill, as it conduces to a great measure of promptitude in delivering of material and filling orders. The shipments by water have also been on a very extensive scale, and will continue so till the close of navigation, when the mill will shut down for a short time to make slight repairs, previous to entering on winter operations.

A DESTROYER IN THE SPRUCE FORESTS IN MAINE.

According to accounts of observations published in the third bulletin of entomological division of the department of agriculture, the ravages of the spruce bud and worm (Tortrix Fumiferana) have been extensive and destructive in the coast forests of Maine west of the Penobscot river. The damage appears to have reached a few miles inland from the coast but the belt in which it has prevailed is marked by extensive masses of dead woods. The trees are attacked in the terminal buds, which are eaten away, and when that is done the case is hopeless. The fatal character of the attack is owing to the fact that the spruce puts forth but few buds, and those mostly at the end of the twigs, and when these are destroyed, it has nothing on which to sustain the season's life. The attack was made in June when the growth is most lively, and just at the time when the check upon it can produce the most serious results. The larches are also attacked by a saw fly, but with results that are not as necessarily fatal as in the case of the spruce. They are more liberally provided with buds, some of which may escape and afford a living provision of foliage. The larch, moreover, sheds its leaves in the fall, and is in full foliage before its enemies attack it. Hence, while the spruce and fir succumb to the first season's assaults, the larch can endure two years of them.—*Science Monthly.*

THE THIRD FIRE AT DULUTH.

Duluth, Minn , has again, for the third time, since July, says the *Northwestern Lumberman*, been visited by a disastrous lumber fire. At 1 o'clock on the morning of November 10th, fire broke out in the lumber yard of the Oneota Lumber Company, destroying about 8,000,000 feet of lumber partly belonging to other parties, the saw mill and 10 buildings, including boarding houses, store, office, dwellings, stable, etc., belonging to the same company, and the saw mill and yard of the Osterhout & Hugart Lumber Company. The losses are about as follows : Oneota Lumber Company, mill, lumber, houses, etc., $60,000 ; insurance, mills, $28,500, lumber, $8,000, store, etc., $7,800 ; total, $44,000. Osterhout & Hugart Lumber Company, loss on mill, lumber, etc., $61,000 ; insurance on mill, $13,000 ; on lumber, $91,000. Other losses on lumber stored in yards are, Bradley, Hanford & Co., $20,005 ; John McKinley Lumber Company, $10,000 ; Duluth National Bank, $5,000 ; Alfred Merritt, $3,000 ; Freeman Keene, $3,000 ; H. W. Coppernall, trustee for the Muskegon National Bank, $40,000 ; DeLittle, $3,000. The area burned over was about 30 acres, and it is estimated that the total loss was 15,000,000 feet. The total loss is put at from $200,000 to $230,000, and the total insurance is $176,000. The Oneota company shut down last Friday, and was said to be in arrears to its men, leading to the supposition that the fire was incendiary, from motives of revenge.

THE FORESTRY AGITATION.

People who are discourpged because the forestry agitation does not take hold better should remember that in France and Germany nothing was done to arrest the destruction of forests till the people began to fear that they would run out of fuel. They then instituted a very effective system of tree culture. In England the same result was reached by the discovery that much land which was unfit for agriculture could be profitably planted with trees. So in America, where the need presses, the trees are being grown. In Dakota, Mennesota, Nebraska, and some parts of Kansas, it is a common practice to devote a part of the farm to timber. Much of the pine land which is being cleared now will eventually be again given up to forest trees, because it is good for nothing else. Nothing much will be done in this direction, however, until lumber grows scarce and the scantiness in the supply gives promise of better prices. It may be taken for granted that every man will continue to clear his timbered lands whenever he wants more acres to cultivate in grain or whenever he chooses to sell the logs. Very few will be governed by any consideration for the climate, the streams, the springs, the floods, or other matter, except their own immediate gain. Measures to restore the forests will only be taken after their loss is felt.—*Southern Lumberman.*

LARGE TREES.

Michigan lumbermen sometimes lay claim to having cut some monstrous trees, remarks the *Lumberman's Gazette*, as in fact they have ; but in comparison to a couple of redwood trees recently reported by the Santa Rosa *Republican* of California, the largest pine tree ever leveled in a Michigan forest would present the appearance of a mere sapling. The *Republican* says that "a redwood tree, cut in this country, furnished all the timber for the Baptist church in Santa Rosa, one of the largest church edifices in the country. The interior of the building is finished in wood, there being no plastered walls. Sixty thousand shingles were made from the tree after enough was taken for the church. Another redwood tree, cut near Murphy's mill, in the county, about ten years ago, furnished shingles that required the constant labor of two years before the tree was used up. The above statements are vouched for as true by Supervisor T. P. Proctor."

TREES IN CITIES.

The planting of Gray's-in-road will be no small part of the improvement of a district of London that till recently had few attractions, and if the Holborn Board of Works be stimulated to carry on the work it is only to be hoped that other bodies will follow the good example. Any one who has looked down on London from great height—say from St. Paul or Queen Anne Mansions —will have been surprised at its greenness. Little oases of verdure are freely spread about through the great wilderness of brick or soot-stained stone. And yet London does not give the general impression of a city where tree life is valued or cultivated. One great essayist of the past generation, who busied himself much with the charms and attractions of the great city, used to boast that in the busiest part of the capital a Londoner need still never lose sight of a tree, and he used to mention with pride and special example near Ironmonger lane which saved Cheapside from being an exception to his rule. But the truth is that London gas and London trees are hidden away from the ordinary predestrian. They are to be met with in the parks and squares and in a few little secluded churchyards insulated and themselves almost buried in the surrounding bricks and mortar. In fact tree life for London is passing through a period of transition. Our ancestors planted elms and oaks apparently without much sympathy or appreciation of their value. London grew apace. London atmosphere developed a new constituent and the smoke and soot flakes of a busy and dirty city killed many and stunted most of the city trees. Then came what may almost be called a discovery. The singular fitness of the plantain, shedding annually its year's growth of bark and the crop of soot that had settled upon it, was demonstrated just when it was needed. There is no reason why all the great London arteries might not show something of the greenness of the Thames Embankment. Portland place might be such a boulevard as Paris would be proud of. On the Ziel at Frankfort they have freely planted trees that leave a Londoner without his favorite excuse of the climate and the smoke.—*London Daily News.*

A WOODEN TELEPHONE.

A score of merchants, brokers, publishers and reporters stood in a circle around a wooden box fastened to the wall of the second story of 67 Greene street and listened to the performance of the box, which was a new acoustic telephone, operated without the aid of electricity. A large wooden disk, with a mouthpiece two and a half inches in diameter, was fastened to the front of the box, and across the mouthpiece was stretched a diagraphm of wooden basket work. A non-insulated wire ran from a nickle plate key on the exterior of the basket-work across the street and four blocks up town to a companion talking box.

"Halloa, there, let me hear you sing," said a handsome young man with a brown mustache, who stepped out of the group around the telephone. He said this in a whisper that was not audible to other gentlemen standing less three feet away.

"All right," bawled a voice at the other end of the line. "I'll sing," and a half a second later the notes of the "Sailor's Sweetheart" floated from the box so distinctly that it sounded as if somebody in the next room was singing. The notes of a mouth harmonicon and an ordinary metal whistle was transmitted with equal clearness ; and when the orator blew his breath on the diaphragm the listener at the other end detected at once what he had done. He blew a horn that produced an echo like a fog alarm, called out fractions and stock figures clearly and closed the test with a swelling "Hurrah for Ben Butler."

"The secret lies in the diaphragm," said Inspector A. A. Knudson. "It is made of an imported wood. Four layers of it woven together are screwed to the mouthpiece disk, and then the telephone box is complete. The wire used to day is made of phophor bronze, but ordinary steel wire can be used. It requires no insulation because no electricity is used. The diaphragm is so sensitive that it can reproduce the vocal vibrations distintly even at a distance of two miles. Aspirates and sounds that it is impossible to transmit over any known telephone are produced by this diaphragm."—*New York Sun.*

WOOD PAVEMENTS.

As containing data and deductions of general interest, we publish a letter recently written by Joseph P. Card, of St. Louis, to O. Chanute, C. E. While the fact that the writer is the president of a wood-preserving company should be given due weight, it should be also remembered that he is an expert in this line of practice, and has diligently studied all the bearings of the case from a business as well as a constructive standpoint :

"In the first place," says Mr. Joseph P. Card, "it is admitted by all, that it is of little use to lay any pavement without a good and substantial foundation, and none of the sub stances used requires this more than wood.

"Such being the case, a substantial concrete foundation is first laid, and it should cost the same, whether granite, wood, or other material be placed upon it ; consequently the only thing to be considered is the cost of the wearing surface, the lasting qualities of same, and its desirability as a pavement when completed.

"In my opinion, the trouble with wood pavements in this country has been : First, the lack of a proper foundation. Second, the people generally have expected a wood pavement, which should have cost as usually laid (with a board foundation) $1.25 per square yard, to last as long as a granite pavement (with a concrete foundation) that cost $4.50 or more per yard.

"Now we take Broadway, New York, for instance, which is 44 feet wide, with a concrete foundation, ready to receive either granite or wood blocks, and suppose granite block are laid at a cost of say $3.60 per square yard, which would be equivalent to $8.80 per front foot for the abutting property.

"On the other hand, a preserved wood block pavement is laid with blocks say 3½ inches by 5 inches deep, leaving a space of ¼ to ⅜ of an inch between the rows, to be filled with suitable materiol, at a cost of $1.62 per square yard, or $3.96 per front foot.

"Now what would be the result ? The granite pavement would probably last 10 to 15 years with slight repairs, and the wood pavement 5 to 9 ; but for comparison we will suppose the granite to last 15 years and the wood 5.

"The granite costing $8.80 per front foot, the wood $3.90 for five years, or $11.88 for 15 years (allowing two renewals), and deducting 79 cents difference in interest at 6 per cent. would make wood cost for this period of time $11.09 per front foot, or a difference of $2.29 per front foot, equal to 15 cents per front foot per year more than granite, which is virtually nothing.

"Now, in my opinion, the wood pavement would be more likely to last over five years than the granite to last 15 ; but if I am incorrect, who is there living or doing business in a street like Broadway, where property is worth thousands per front foot, that would not willingly pay the slight difference, or many times the difference to get rid of the incessant noise and confusion incident to a stone pavement ?

"I think the thoroughfares should be paved with wood, and the by-streets with granite or stone, as it would last indifinitely.

"My reason for using a five inch wooden block is, that when the surface of the street becomes worn down to the extent of 2 to 2½ inches, it becomes so irregular that the remainder of the blocks, whether 2½ or 5 inches, are so softened with moisture, which accumulates in the depressions from rainfall or by sprinkling, that they soon go to pieces.

"Wood on end, if it could be kept dry, would outwear granite, as shown by Col. Flad's tests made at our water works here, consequently the drier the wearing surface is kept the less wear.

"Fully creosoted wood blocks under heavy traffic wear rapidly, as shown on the Brooklyn bridge, for the reason that the oil keeps the fiber soft.

"There was more wear on the St. Louis bridge, which is paved with wood, in the two months which the bridge was salted, to remove slush and ice, than in the balance of the year.

"In other words, the principal wear of any wood pavement occurs during wet weather, and the aim should be to keep the wearing surface of the wood as dry and smooth as possible.

"With a good concrete foundation once down, the wooden blocks could be renewed when necessary, during night time, with little or no inconvenience to travel.

"From a sanitary point of view, the concrete foundation would prevent what most people seem to dread, the leaking through of impurities to the soil beneath, while the treated blocks would disinfect any portion that might enter the same."—*Scientific American.*

THE prohibition of the importation of rags to this country, says the *Lumberman's Gazette*, has had the effect of advancing the interests of our wood pulp manufactories, by increasing the demand for their product. The cholera in Europe is demonstrating the truth of the old adage that "it is an ill wind that blows nobody any good," and wood pulp manufactories are still anticipating an advance in the price of their product, because of increased demand.

Wrecked Manhood.

Victims of youthful indiscretions suffering from nervous debility, lack of self-confidence, impared memory, and kindred symptoms, should send three letter stamps for large illustrated treatis, giving means of certain cure, and numerous testimonials. Address World's Dispensary Medical Association, Buffalo, N Y

Chips.

E. B. EDDY's large saw mills in Hull closed down for the season Nov. 11th.

THE lumber business is increasing at Muskegon, up to Nov. 1st it has shipped 480,207,000 feet of lumber and 17,724 cords of slabs.

WHILE James Miller was adjusting a belt in Reid's saw mill, near Foxboro, his arm came in contact with a circular saw. Amputation was found to be necessary.

WM. DOWNS, a workman engaged in the Dawn lumber woods, had his leg smashed Nov. 12th, by a log rolling upon it. He was taken to Dresden.

THE mills, says the *Lumberman's Gazette*, continue to increase the amount of lumber in pile on the Saginaw river, which is at present greater than it has ever been since the business was inaugurated.

ONE of the latest ideas is lumbermen's hospitals, which, it is said, are being established in several places adjacent to where heavy logging operations are going on.

THE shipments from the Saginaw river up to November 1st, amount to 720,962,058, which has never been exceeded except in 1881 and 1882. The shipments for the same period in 1883 were over 8,000,000 feet less than in 1884.

GRAHAM, HORNE & Co., Duluth, Minn., within six weeks prior to November 8th, sawed and shipped 2,000,000 feet of dimension to Port Arthur for the Canadian Pacific railway.

H. H. MARTIN, of Shawano, Wis., is this season operating for the Chippewa Logging & Boom Company, operating two camps, at which he intends to put in 10,000,000 feet of logs.

JOHN R. BOOTH, the Ottawa, Ont., lumber manufacturer, has let a contract for the building of a steamboat to run on Lake Nipissing, Ontario. It will be the largest steamer that ever navigated the lakes so far north in that province.

MESSRS. Cartwright & Simpson, says the Halton *News*, have purchased, by public auction, ten acres of pine and oak timber from Mr. J. Flynn, of Carlisle, for $2,600, and lumbering operations are expected to be lively in that neighborhood this winter.

WHAT was considered the largest raft of red cedar ever seen at Apalachicola, Fla., was surveyed there recently. It was brought in from Marianna. It contained 236 logs, some of them measuring 28 cubic feet. Another raft containing 175 logs was coming in.

ESTIMATES of the standing pine timber in Arizona place the amount at 1,000,000,000 feet. While this amount seems large, the *Lumberman's Gazettee* remarks, it would only furnish work for the saw mills on the Saginaw river a single year.

AT a late sale of timber licenses at Fredericton, N. B., on Oct. 30th, a block of limits in Caldwell Parish, Kings county, was sold $117 per mile, and secured by T. P. O'Connor. Another of two miles on Pishehogan river, Charlotte county, was bought by James Packard at $26 a mile.

THE Cutler & Savidge Lumber Company, of Spring Lake, Mich., now puts down its intended input of logs this season at 35,000,000 feet as compared to 63,000,000 last year. The company has 12,000,000 feet of lumber on hand at its Spring Lake mills, besides a quantity in its Indian yards.

THE Rathbun company, of Deseronto, Ont., have patent lumber dry kilns, with a capacity of 50,000 feet daily, and the amount of water evaporated by each of the three dry kilns is 30,000 pounds. This amounts to over half a pound of water for each foot of inch lumber, or saves about 13,000 pounds on each carload of lumber shipped.

THE Ottawa *Citizen* says :—The lumbermen's agents say that the work in the shanties this winter will be good. Wages will be about the same as last year; if anything, a trifle better. The chief lumbermen are shipping good hands north every day. A number have gone or are going to the State of New York, induced by high wages, but the vast majority prefer to remain in Canada among friends and where, all things considered, they think, and rightly, that a fair day's work gives a fair day's wage.

Lumber Shipments.

The annual shipments of lumber from the river St. Lawrence to the river Plate during the season of navigation has been :—From Montreal —Pine, 24,386,378 feet; small stowage, 364,436 feet; from other ports on the St. Lawrence—Pine, 1,130,262 feet; spruce, 11,421,908 feet; small stowage, 640,599 pieces; total shipment from all source, 36,938,548 feet of pine and spruce, and 1,005,035 pieces of small stowage. The largest shipment were during the months of July and August. During the season of navigation, 1883, 18,768,652 feet of pine and spruce were shipped; the amount of small stowage shipped not recorded.

MR. HEBRON HARRIS, of Ottawa, is getting out 17,000 cords of wood and 205,000 ties for the Canada Pacific Railway.

Catarrh—A New Treatment.

Perhaps the most extraordinary success that has been achieved in modern science has been attained by the Dixon treatment for Catarrh. Out of 2,000 patients treated during the past six months, fully ninety per cent. have been cured of this stubborn malady. This is none the less startling when it is remembered that not five per cent. of the patients presenting themselves to the regular practitioner are benefitted, while the patent medicines and other advertised cures never record a cure at all. Starting with the claim now generally believed by the most scientific men that the disease is due to the presence of living parasites in the tissues, Mr. Dixon at once adapted his cure to their extermination; this accomplished the Catarrh is practically cured, and the permanency is unquestioned, as cures effected by him four years ago are cures still. No one else has ever attempted to cure Catarrh in this manner, and no other treatment has ever cured Catarrh. The application of the remedy is simple and can be done at home, and the present season of the year is the most favorable for a speedy and permanent cure, the majority of cases being cured at one treatment. Sufferers should correspond with Messrs. A. H. DIXON & SON, 305 King street west, Toronto, Canada, and enclose a stamp for their treatise on Catarrh.—*Montreal Star.*

1yl22.

FOR SALE!

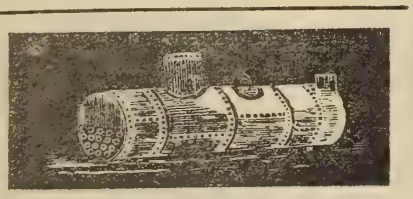
Steam Saw Mill,

complete with shingle and planing machines, all in first-class working order, will cut 50,000 feet a day. Engines are large and almost new, Will be sold cheap. For further particulars apply to

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AGENTS wanted for The Lives of all the Presidents of the U. S The largest, handsomest, best book ever sold for less that twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people Tant it. Any one can become a successful agent terms free. HALLETT BOOK CO., Portland Maine.

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OTTAWA, ONT.

STILL RETAINS THE LEAD

Have been awarded every Medal ever offered at Exhibitions in Canada for our Lines of Goods, notwitstanding the misleading advertisements of unscrupulous firms claiming awards, medals, &c., which they have never received. See letter from H. J. HILL, Esq., Secretary Toronto Industrial Exhibition Association, below. This year at Toronto, Montreal and Ottawa Exhibitions, we have been awarded

10—MEDALS—10

—FOR—

TENTS, MARQUEES,

And CAMP FURNITURE.



Lumbermen, Contractors and Surveyors

And other large buyers, offered Special Inducements.

New Illustrated and Descriptive Catalogue mailed on application.



OUR LINES OF

Tents, Flags, Tarpaulins and Camp Furniture, Shanty and Horse Blankets

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P. O. BOX 345.

OFFICE OF THE INDUSTRIAL EXHIBITION ASSOCIATION,
TORONTO, MARCH 10, 1884.

The National Manufacturing Co'y, Ottawa:

GENTLEMEN,—In reply to your enquiry, I beg to say that the highest awards made at the Industrial Exhibition for the years 1881, 1882, and 1883, for Tents, Marquees and Flags, were to your Company, being a Silver Medal for each year. Last year, 1883, was the first in which a medal was specially offered for Camp Furniture and Equipages, and it was awarded to the National Manufacturing Co'y, of Ottawa.

I am, your respectfully,
H. J. HILL, Manager and Secretary

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Market Reports.

TORONTO.

From Our Own Correspondent.

Nov. 24.—Navigation for the season of 1884 may now be considered as completely closed. Sixteen vessels of various sizes have loaded and cleared this port since my last letter, taking with them 2,315,000 feet of lumber, the chief portion of which was pine, 215,000 for Canadian ports and balance for Oswego, N. Y. The quantity remaining on our docks at this date is much less than at the corresponding period of last year. The same may be said regarding stocks held at most of the mills north of this city. If shipments had commenced one month earlier in the spring there would have remained at this time but little lumber that was really fit for shipment, and it now remains for the shippers and mill men to cast up their accounts and take stock. One thing is self-evident, there has been too much lumber forced upon the market to make the season's operations profitable. Mill men who disposed of their season's cut early in the spring fared the best, in fact I may venture to say they are about the only ones who have made anything as the result of their seasons labor. Prices continued to drop during the entire summer until its close, so that bill stuff may be quoted $1.00 per M. below the spring quotations and other kinds $1.50 to $2.00. The above figures apply to car load or vessel lots, the drop in prices at the yards is slightly less, so that the retailers have had the best end during the latter part of the season. Sales from the yards, however, have fallen off seriously during the last month. There has not been the amount of activity noticeable in other years at the closing up of the season's work. No doubt this may be partially accounted for by reason of the greater quantities sold to consumers by the wholesale men, direct from the rail, or from piles in the various railroad yards. The amount of trade done in this way becomes more apparent every week to those who are accustomed to the trade, and whose business calls them down about the wharves and railroad yards, indeed it is quite a common occurence to see consumers, with their teams, taking away 10 M of shingles, or 1,000 feet of a particular kind of lumber, and for which they usually pay as low a figure as that charged to the retail dealer by the car lot. No opportunity of turning the *honest penny* is lost by the wholesale dealer. Competition is keener in the lumber trade here at present than in any other branch of business I know of, and the retail men lick the hand that whips them, by purchasing as freely from the men that do this class of trade as from men who dislike and do not practice this mode of business, although it is doubtful if such trade benefits the wholesale men, as they are unable to look after small debts, contracted by such a class of customers, as sharply as the retail men; still they seem to like it, by way of variety, I suppose.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
Scantling and joist, up to 16 ft	13 50
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 00
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	20 00
" " " 32 ft	21 00
" " " 34 ft	22 50@22 50
" " " 36 ft	24 00
" " " 38 ft	27 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	24 00
" boards "	20 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 00
Three uppers, Am. inspection	35 00@40 00

B. M.

1½-inch flooring, dressed	30 00
1½ " " rough	16 00
1¼ " " dressed	25 00
1¼ " " undressed	15 00@15 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	2 90
Sawn Lath	2 75

MONTREAL.

From Our Own Correspondent.

Nov. 25.—Business for the past two weeks has been pretty fair, but nothing to boast of, the busy season is now about over and things are likely to remain quiet till after the Christmas holidays. We advance our quotation for butternut, not that there is any advance in the price of the article we have been quoting, but the quality is now better and the margin shows the difference in quality, we now quote from $25 to $40 according to grade. Laths are advanced in price and are now selling at $1.75 to $2.00. We quote ex yard as follows:

Pine, 1st quality, ℔ M	$35 00@40 00
P ne, 2nd " ℔ M	22 00@24 00
Pine, shipping culls, ℔ M	14 00@16 00
Pine, 4th quality deals, ℔ M	10 00@12 00
Pine, mill culls, ℔ M	7 00@ 9 00
Spruce, ℔ M	10 00@13 00
Hemlock, ℔ M	9 00@10 00
Ash, run of log culls out, ℔ M	15 00@18 00
Bass, " " ℔ M	15 00@20 00
Oak, ℔ M	40 00@50 00
Walnut ℔ M	60 00 100 00
Cherry, ℔ M	60 00@80 00
Butternut, ℔ M	25 00@40 00
Birch, ℔ M	20 00@25 00
Hard Maple, ℔ M	25 00@30 00
Lath, ℔ M	1 75@2 00
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 50@ 0 00

SHIPMENTS.

The season of navigation has now closed and from returns which we have received from the Export Lumber Company, has apparently been a very successful one so far as the quantity of lumber exported is concerned. The shipments of pine and spruce from Montreal to the River Platte during 1884 was 24,386,378 feet, and from the ports on the St. Lawrence to the same destination was 12,552,170 feet, being a total of 36,938,548 feet, an increase over 1883 of 18,169,-896 feet. The totals for the past 14 years are as follows:

Year.	*Feet.*
1883	18,768,652
1882	24,419,827
1881	16,147,941
1880	10,420,080
1879	12,476,150
1878	10,855,246
1877	8,787,928
1876	3,437,000
1875	10,123,000
1874	16,262,293
1873	36,073,919
1872	28,234,968
1871	16,005,935
1870	25,145,183

CORDWOOD.

Roads in the country have been in a very bad state, which has interfered with the carrying of wood to the railway stations, so that the arrivals of wood here have been small, and business has not been brisk, but prices are unchanged. We quote at the wharves ex cartage as follows:

Long Maple	$ 5 50
Long Birch	5 00
Long Beech	5 00
Tamarack	4 00

LIVERPOOL MARKETS.

Our latest advices report the imports as having been moderate with the exception of spruce deals, and the consumption generally as satisfactory. Private sales of spruce deals from St. John, N. B., at £6 per standard ex quay, and several parcels on c.i.f. terms, and the same price was realized for them at auction. 1st quality pine deals are quoted at £19 to £22; 2nd quality pine deals, £15 to £16 10d. and 3rd quality £8 to £9.

WINNIPEG.

The *Commercial* of Nov. 18th says:—Mills have nearly all closed down, and preparations are being made for going into logging camps for the winter. There have been a few for stuff to finish outdoor contracts, and the number of buildings in the city to finish during the winter promises to keep up a straggling demand for finishing lumber for a month at least. The season altogether has been a very unsatisfactory one both to dealers and manufacturers. No quotations can be given, and any heard are merely nominal.

CHICAGO.

AT THE DOCKS.

The *Northwestern Lumberman* of Nov. 22nd says:—While prices have not greatly differed from those of last week, on most sales, there have been several instances in which piece stuff has sold at $8.75, an advance of 25 cents a thousand on ordinary sales. The higher figure has been realized in cases where the cargo was very desirable, and suited the purpose of the yard that was catering to the Kansas demand.

No. 2 inch is selling at about previous prices, though instances are frequent in which dry lumber has sold at $1 above quotations. A special demand has prevailed, for the reason before mentioned, and when that had to be met the purchaser was willing to pay outside prices. Shingles are selling at mostly unchanged prices, though there is a tendency to outside figures.

Quotations are as follows:

Piece stuff, green	$ 8 50@ 8 75
Long timber, green	10 00@12 00
Coarse common	9 00@ 9 50
Boards and strips—No. 2 green	9 50@11 00
Boards and strips Medium, green	11 00@15 00
Boards No. 1, green	15 00@18 00
High grade	18 00@22 00
Shingles, standard	1 80@ 1 90
Shingles, Choice	1 90@ 2 00
Shingles, extra	2 00@ 2 25
Shingles, clear	2 80
Shingles, cedar	1 35@ 1 80
Lath	1 25@ 1 40

LAKE FREIGHTS.

Grand Haven by steam	$ 1 50
Muskegon by steam	1 50
Whitehall	1 62½
Ludington	1 75
Manistee	1 75
Menominee dry	1 50½
" green	1 62½
Oconto	1 62
Cheboygan	1 50
Alpena	1 75
Bay City	2 00
Frankfort	1 62½

AT THE YARDS.

The general trade, other than that affected by the southwestern drain, is moderate. A steady distribution is going on, but there is little vigor in demand. Now that there will be a check to the flow Kansas-ward, we may expect a sharp decline in aggregate shipments.

On November 1st there was lumber on hand in the seven yards of South Chicago to the amount of 22,495,607 feet, a decrease of 1,279,-171; shingles, 20,133,250, a decrease of 5,061,-250. Evidently the South Chicago dealers are either buying sparingly or shipping heavily—probably both.

Receipts of lumber, shingles, etc., from Jan. 1st to Nov. 20th as reported from the Lumberman's Exchange:—

RECEIPTS.

	Lumber.	*Shingles.*
1884	44,046,000	26,738,000
1883	21,857,000	11,785,000

FROM JANUARY 1, 1884, TO NOV. 20, 1884, INCLUSIVE.

RECEIPTS.

	Lumber.	*Shingles.*
1884	1,734,723,000	846,130,000
1883	1,798,211,000	1,072,121,000
Decrease	63,488,000	225,991,000

LAKE RECEIPTS FROM JAN. 1 TO NOV. 20.

Lumber	1,538,785,000
Shingles	753,464,000
Lath	64,041,000
Posts	2,547,776
Railroad ties	891,491
Wood, cords	24,785
Bark, cords	21,450
Slabs, cords	42,807
Telegraph poles	140,296
Piles	517
Spars	12

STOCK ON HAND NOV. 1.

	1884.	1883.	1882.
Lumber & timber	688,057,336	665,947,082	706,652,450
Shingles	321,961,925	389,972,515	278,178,150
Lath	70,742,042	83,359,413	63,527,227
Pickets	1,830,117	2,646,462	3,079,436
Cedar posts	400,805	781,571	150,836

FREIGHT RATES TO EASTERN POINTS.

In effect from Nov. 1st, 1884, to March 1st, 1885.

Chicago to—	
New York and common points, per 100 pounds	35c.
Albany	32c.
Boston and common points	40c.
Philadelphia	33c.
Baltimore	32c.
Washington	32c.
Buffalo and Pittsburgh	20c.
Erie, Pa	20c.
Dunkirk, N. Y	20c.

TONAWANDA.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@13 00

BUFFALO.

We quote cargo lots:—

Uppers	$45 00@46 00
Common	17 00@18 50
Culls	12 50@13 00

BOSTON.

The *Journal of Commerce* of Nov. 22nd says: Trade is without any special improvement in any line, and prices are about as before. There is a surplus of the poorer grades of lumber, but choice grades are well in hand and steady in price.

The Boston correspondent of the *Northwestern Lumberman* writes thus:—"Although there is a steady demand for the best grade of cherry, it is much less than the demand of last year. Quartered white oak is now the pet of finishers. No two pieces are alike, it admits of as fine a finish as rosewood, and one particular advantage it has over some other hardwoods is its ability to hold its color and look well with age. This is not true of ash or butternut, which becomes dingy, and have a dirty look. We all know that walnut requires age to bring out its richness. For that reason it will always be a popular wood, and just now some of the finest jobs in the city are being finished in walnut. Poplar to a great extent has taken the place of pine for moulding purposes, and there is a difference of at leost $10 a thousand in the price."

CANADA PINE.

selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

OSWEGO, N.Y.

From Our Own Correspondent

No change in prices: trade for the past two weeks has been very much depressed. Navigation is about closed for the season.

Three uppers	$42 00@46 00
Picking	32 00@35 00
Cutting up	22 00@25 00
Fine Common	20 00@22 00
Common	14 00@18 00
Culls	11 00@14 00
Mill run lots	16 00@22 00
Sidings, selected, 1 in	30 00@35 00
" 1½ in	32 00@36 00
Mill run, 1x10, 13 to 16 ft	16 00@21 00
Selected	21 00@24 00
Shippers	14 00@16 00
Mill run, 1¼x10	17 00@20 00
Selected	21 00@30 00
Shippers	14 00@16 00
Mill run, 1 & 1½ in, strips	15 00@18 00
Selected	22 00@30 00
Culls	11 00@13 00
1x7 selected for clapboards	25 00@35 00
Shingles, XXX, 18 in. pine	4 00@ 4 55
Cedar	3 00@ 3 50
Lath, No 1	2 00@ 2 20
No 2	1 75@ 2 00

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ℔ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	45 00@50 00
Pine, good box	22 00@33 00
Pine, common box	13 00@15 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 33
Pine, 10-in. boards, culls	00 16@00 21
Pine, 10-in. boards, 16 ft., ℔ M	28 00@32 00
Pine, 12-in. boards, 16 ft	28 00@33 00
Pine, 12-in. boards, 13 ft	28 00@00 00
Pine, 1¼ in. siding, select	40 00@43 00
Pine, 1¼-in. siding, common	20 00@00 00
Pine, 1-in. siding, select	42 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2¼x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Black walnut, gook, ℔ M	100 @120 00
Black waluut, ¾ inch	80 00@90 00
Black walnut, ¾ inch	00 00@65 00
Scaymore, 1-inch	30 00@32 00
Scaymore, ¾-inch	23 00@25 00
White wood, 1-inch and thicker	38 00@43 00
White wood, ¾-inch	30 00@32 00
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@65 00
Cherry, common, ℔ M	25 00@30 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	38 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	4 50@ 4 50
" clear, "	0 00@ 3 00
" cedar, mixed	0 00@ 3 30
" cedar, XXX	0 00@ 2 00
" hemlock	0 00@ 2 00
Lath, hemlock, ℔ M	0 00@ 2 00
Lath, spruce, "	0 00@ 2 25

CARDIFF.

The *Timber Trades Journal* of a recent date says:—The arrivals since our last report have consisted of a pitch pine cargo from Doboy, a fair size cargo of timber from Quebec, and a steamer cargo of about 500 standards deals and boards from Gefle. White Sea goods seem to be rather scarce.

In spite of the very lively building business which is still going on in this district, and the fact that the contract for the new dock at Parry having been given out, and work is to commence this month, there is not, so far, any improvement in our retail prices, and things remain at present in the quiet state we have already had occasion to record.

TYNE.

The *Timber Trades Journal* of a recent date says:—The arrivals of the past seven days are very small and insignificant; one cargo of pitch-pine, one cargo of Quebec goods, one of props, and the usual Christiania steamer are about all the arrivals to chronicle. A few ships are on the way yet from the Baltic ports, but the extremely stormy weather of the past week and strong westerly winds will have driven all such as were in the North Sea to the coasts of Norway and Denmark, while it is to be feared many of them will have been lost.

Stocks are not a great deal altered, in redwood, deals and battens they are only small, and should there be a fair amount of demand during winter and spring months the supply would be short. At the present low rate of consumption, however, they are ample for a long time to come. Business is still very flat, and in consequence of the closing of the shipyards and engine works an immense number of men are unemployed.

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, Nov. 18, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., Washington, D. C.:—

308,072.—Barrel header—W. Hoffman, Newark, N. J.

308,204.—Peg wood sharpener—W. G. Scott, Batesville, Mass.

308 332.—Plane, rabbet—J. A. Traut, New Britain, Conn.

308,063.—Saw mill feed mechanism—J. Cook, assignor to Sinker, Davis & Co., Indianapolis, Ind.

308,082.—Saw teeth, device for setting and jointing—D. Logan, Hartstown, Pa.

308,188.—Sawing machine, band—P. Miller, Norwich, Conn.

308,187.—Trees, device for felling—P. Miller, Norwich, Conn.

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c, measured and culled to date:—

	1882.	1883.	1884.
Waney White Pine..	3,104,648	3,513.515	2,198,453
White Pine.....	7,961,695	7,130,419	3,686,744
Red Pine.....	1,456,850	474,458	327,735
Oak	1,313,109	1,883,294	772,042
Elm.....	714,549	309,261	653,812
Ash	310,769	257,827	410,458
Basswood	1,471	2,244	4,121
Butternut.....	2,639	1,028	1,260
Tamarac.....	51,975	7,409	19,113
Birch & Maple.....	269,661	138,803	201,289
Masts & Bowsprits...	33pcs	—pcs	—pcs
Spars.....	51 pcs	—pcs	41 pcs
Std. Staves.....	368.1.1.27	677.3.0.15	93.6.1.12
W. I. Staves.....	1171.0.1.07	619.2.3.20	260.8.0.19
Brl. Staves.....	75.4.3.23	115.3.0.16	9.7.1.0

JAMES PATTON,
Supervisor of Cullers.

Quebec, Nov. 7.

Noticed by Spian.

The London *Canadian Gazette* says:—The woods which the Province of New Brunswick exhibited at the Forestry Exhibition have been noticed with much approval by the Spanish forestry magazine, *Revista de Montes*, which is published semi-monthly in Madrid. From the issue of Sept. 1st we make the following translation:—"Canada exhibits woods of handsome colours (*preciocos colores*) and great strength, among which may be distiuguished for the fineness of their grain the ash, maple and birch. The *Abies Canadensis* (hemlock spruce) is abundant there; its bark is used for the extraction of tannin, which is exported in the liquid state. Until within a short time only the bark of this tree was used; latterly, however, the wood is being exported to the United States."

"What we learn with pleasure we never forget."—*Alfred Mercier.* The following is a case in point. "I paid out hundreds of dollars without receiving any benefit," says Mrs. Emily Rhoads, McBrides, Mich. "I had female complaints, especially 'dragging down,' for over six years. Dr. R. V. Pierce's 'Favorite Prescription' did me more good than any medicine I ever took. I advise every sick lady to take it." And so do we. It never disappoints its patrons. Druggists sell it.

Stranger Than Fiction

are the records of some of the cures of consumption effected by that most wonderful remedy—Dr. Pierce's Golden Medical Discovery. Thousands of grateful men and women, who have been snatched almost from the very jaws of death, can testify that consumption, in its early stages, is no longer incurable. The Discovery has no equal as a pectoral and alternative, and the most obstinate affections of the throat and lungs yield to its power. All druggists.



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SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Timber," will be received at this office until Monday, the 17th day of November, next, inclusively, for the supply of timber required in connection with the Dredging Plant of the Department, according to a specification to be seen at the Department of Public Works, Ottawa, where printed forms of tender may be seen

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied and signed with their actual signatures.

Each tender must be accompanied by an *accepted* bank cheque, made payable to the order of the Honorable the Minister of Public Works, for the sum of $150, (one hundred-and-fifty dollars,) which will be forfeited if the party decline to enter into a contract when called upon to do so, or if he fail to complete the work contracted for. If the tender be not accepted the cheque will be returned.

The Department will not be bound to accept the lowest or any tender.

By order,
F. H. ENNIS,
Secretary.

Department of Public Works, Ottawa, 28th Oct., 1884. 3d10eod1L22

GOLD for the working class. Send 10 cent for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Augusta, Maine.

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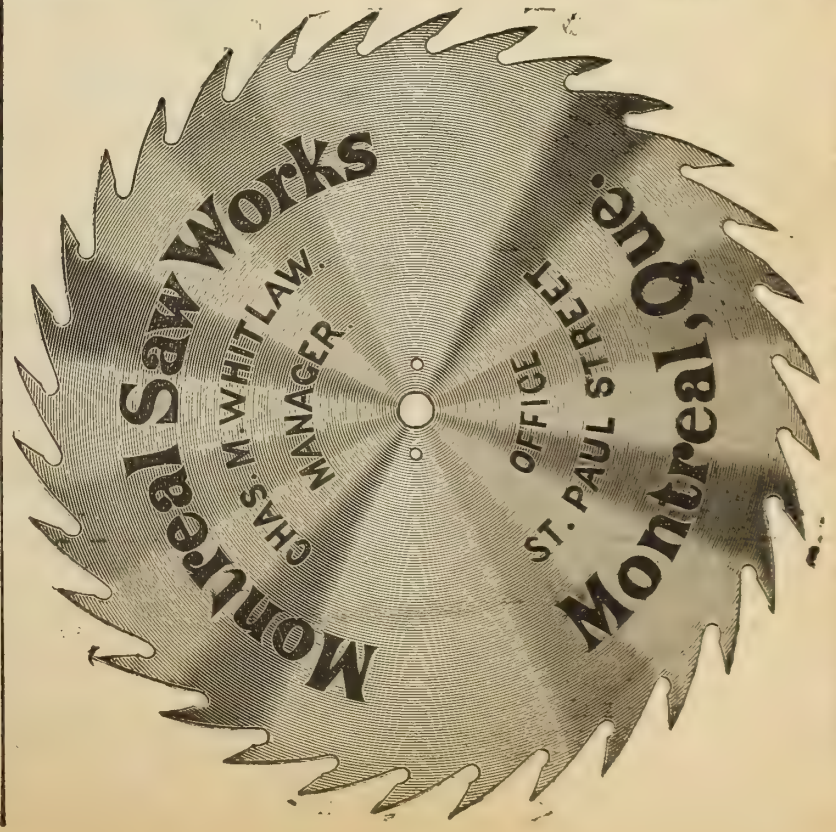
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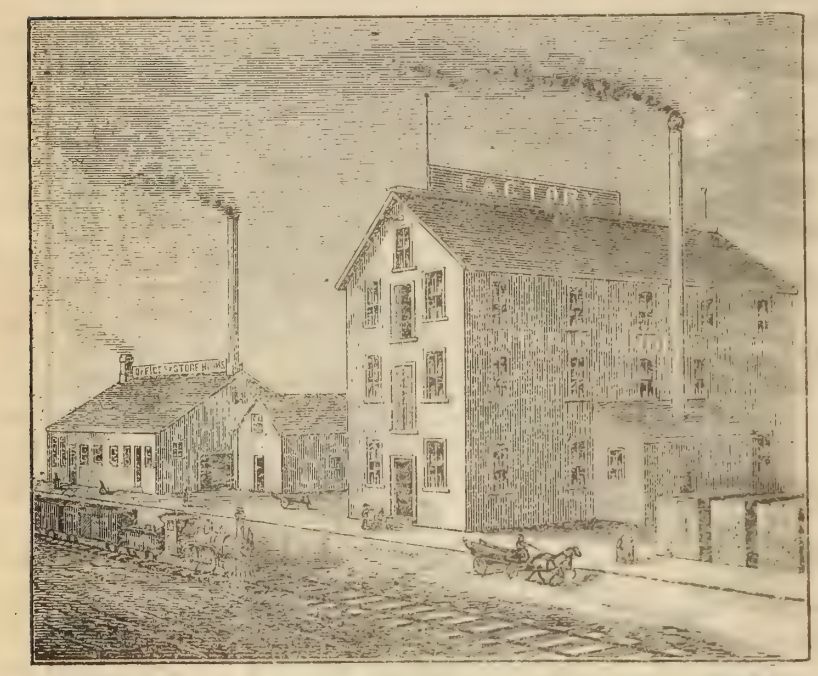
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Patnet Cedar Rib Canoes, Patent Longitudinal Rib Canoes, Basswood Canoes, Folding Canoes, Paddles, Oars, Tents, and all Canoe Fittings.



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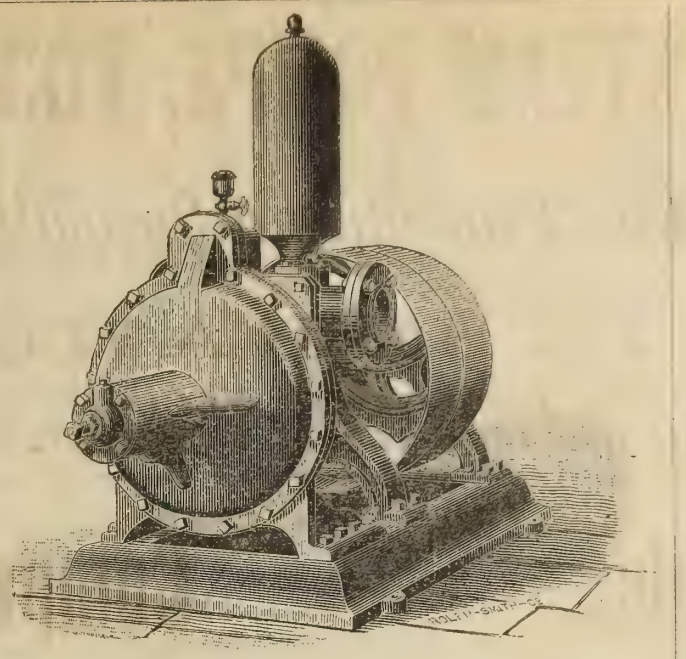
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No.	Diameter of Pipes.		No. of Revolutions.	Capacity per minute at table speed.	Price.
	Suction.	Discharge.			
2	2½ in.	2 inch.	250	125	$100
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MR. NORMAN, PERTH, ONT., June, 1883.
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DEAR SIR,—I have experienced considerable benefit from your Appliances. I feel stronger and better every way. Yours truly, R. E. HALLIBURTON.

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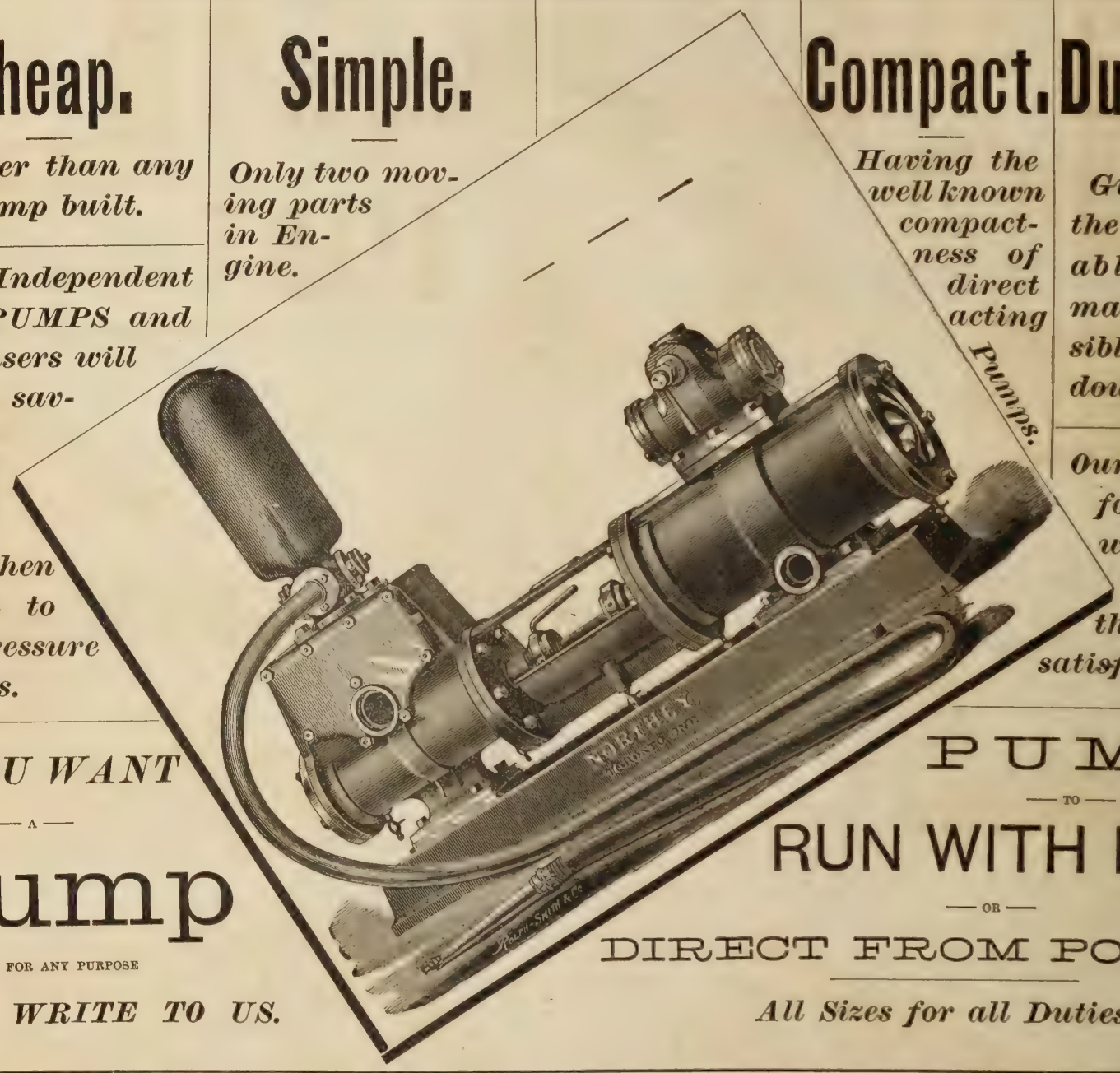
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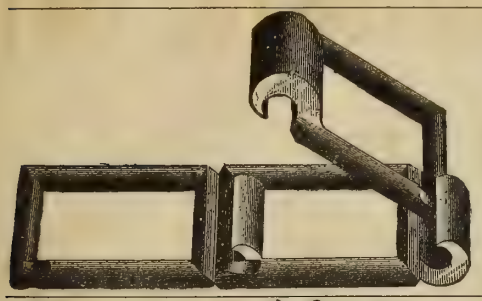
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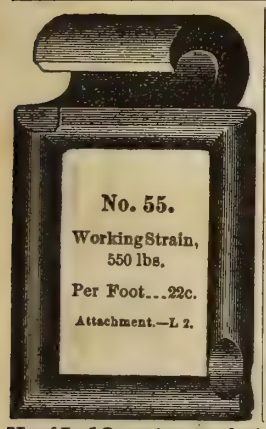
NORTHEY & COMPANY,

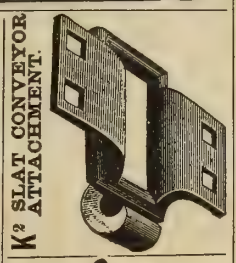
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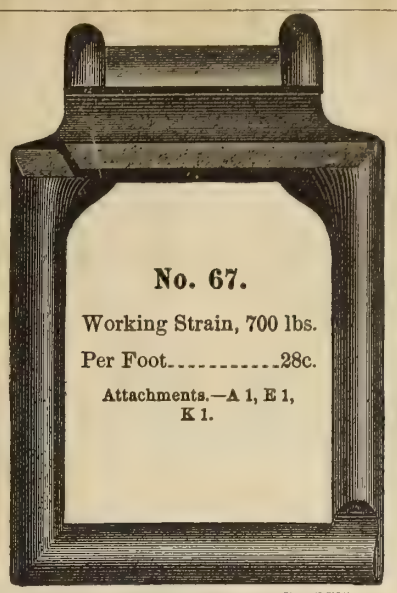




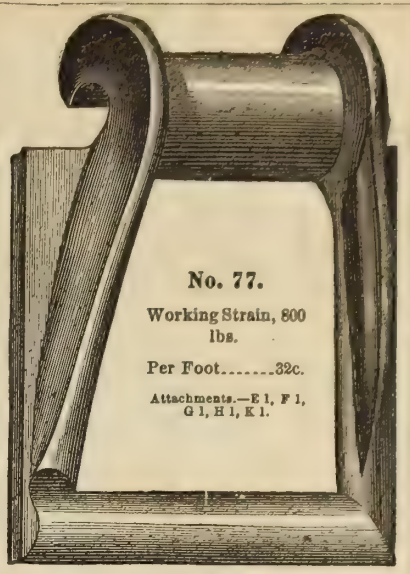




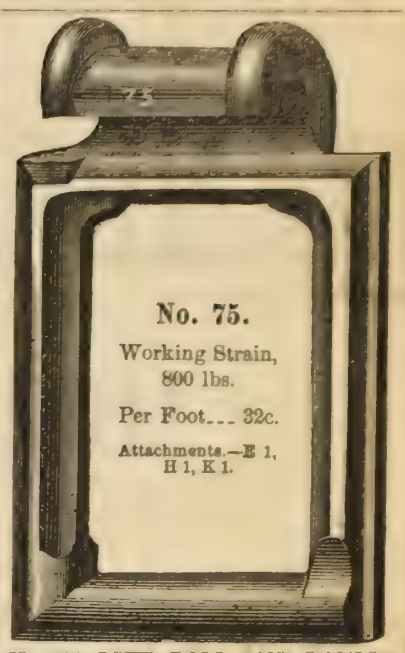
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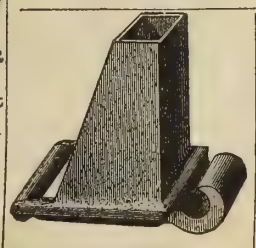
No. 67—MEDIUM SAWDUST CONVEYOR CHAIN.

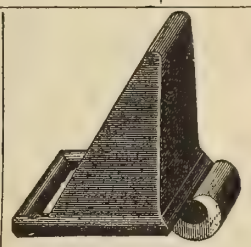


No. 77—CONVEYOR AND LIVE ROLL CHAIN.



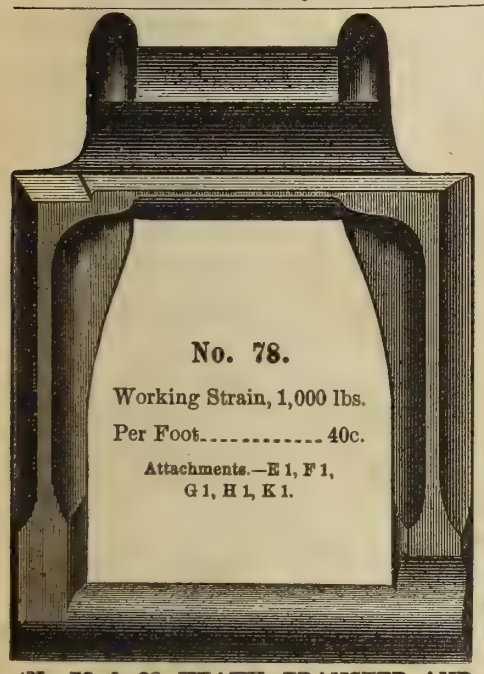
No. 75—LIVE ROLL AND DOUBLE STRAND ELEVATORS.





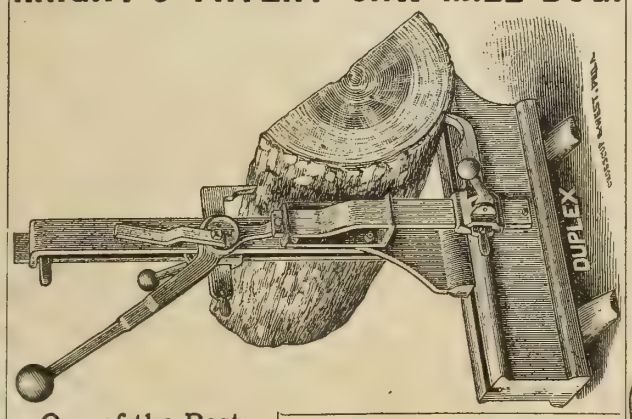
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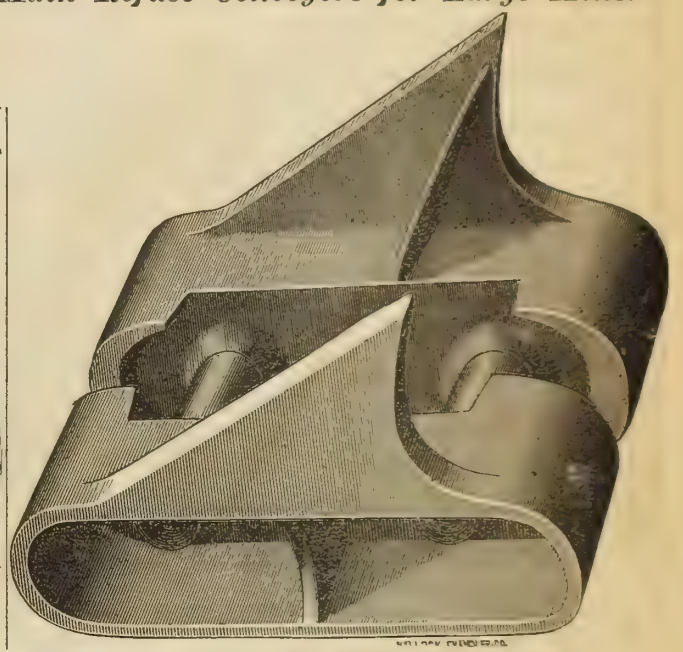


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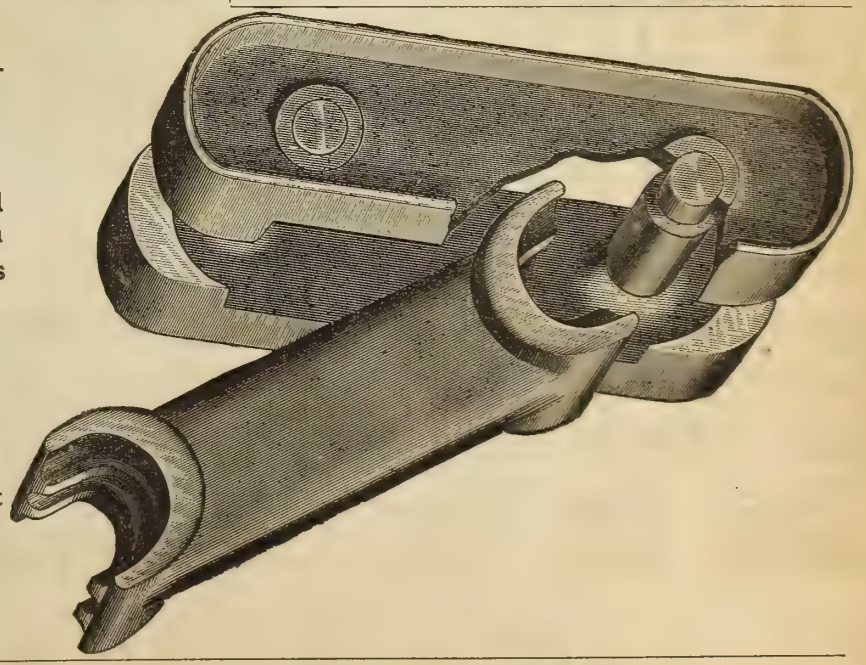


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No strain or wear on Rivets.

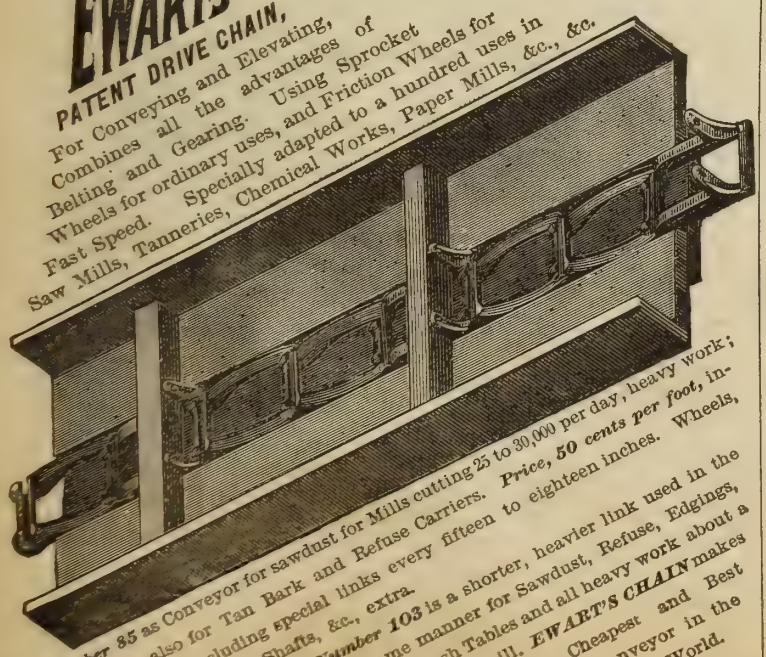
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For Conveying and Elevating, Combines all the advantages of Belting and Gearing. Using Sprocket Wheels for ordinary uses, and Friction Wheels for Fast Speed. Specially adapted to a hundred uses in Saw Mills, Tanneries, Chemical Works, Paper Mills, &c., &c.



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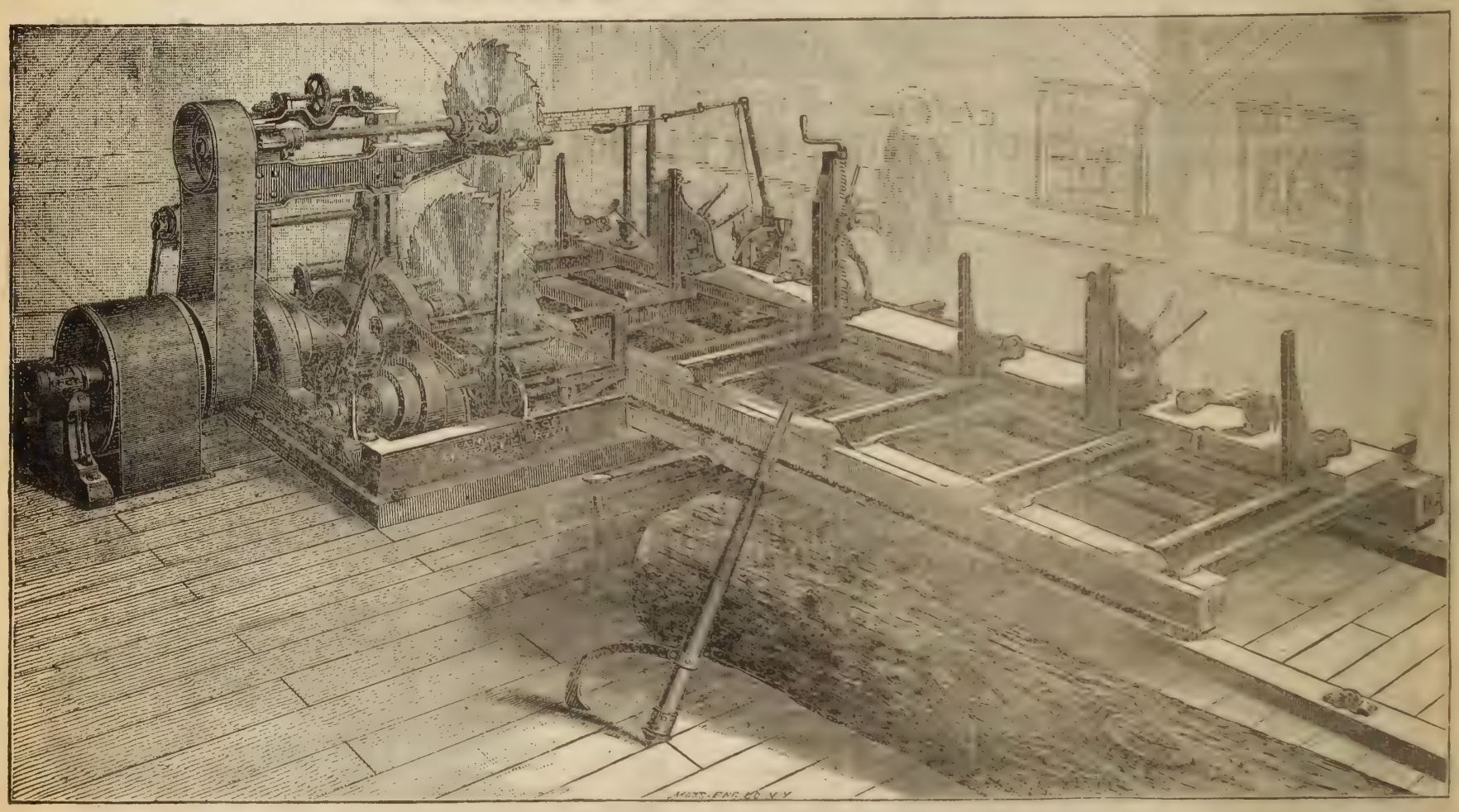
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Circular Saw Mills,
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Clapboard Machines,
Clapboard Planers,
Stationery Bed or Roll Feed Planers,
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Shingle Machines,
Lath Machines,
Double and Single Power Feed Edgers,
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THE CANADA LUMBERMAN

AND MILLERS' MANUFACTURERS AND MINERS GAZETTE.

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A FEMALE SAW MILL PROPRIETOR.

There is a woman in Tukertown, Fla., who owns and manages a saw mill. The circumstance was so unusual that the *Northwestern Lumberman* wrote to her for an account of her experience, and the following unique letter was the result, from which men in business might get "pointers":

Your letter of a late date requesting me to give my experience as a lumber manufacturer is at hand. I will state at the start that I am not in the business through choice, but having loaned money to parties with which to purchase a saw mill, I was compelled by their failure to make even the first payment to take the machinery from them. I then put my son-in-law, Ernest Wever, who promised great things, in charge. I told him I knew nothing of saw milling, but I knew that the sawdust was too fine and the scratches on the boards too close together. I left him to run the mill, but in a short time I found he could do no better than other men and I took him out of there so quick that it made his heard swim. I moved the mill a distance of 20 miles, fording the Hillsborough river, and placed it near my house, at an actual expense of $9; and in a few days I had every thing in good order. I have my own teams and carts, and take the timber from my own lands.

Although accustomed to manage my own affairs, commencing by the time I was grown, I found difficulties enough in making lumber, and I have often said that a saw mill and satan belong to the same family, and some people say that since I became the owner of one they are sure of it; but while they talk I am at work. This is the trouble with half the country saw mills: There is too much talking and not enough work. Why, Mr. Editor, the most of men talk over a log long enough to saw it into inch boards. Then when they get started they discover that the fireman has not steam enough; then they most all sit down and talk again. By the time steam is up and one the two boards sawed, a belt must be repaired, which might just as well have been attended to before working hours in the morning or at noon. Then one man sews the belt while all engage in talk again. When the belt is ready the sawyer gets it into his mind that machinery needs oiling; then he hunts up the oil can, for he never has a place for anything, and goes around squirting oil into every hole but the right one, while the other hands go on with their talking. The next day they are out of logs and the mill hands do nothing except to allow "their time to go on." The day following some of the men are reported sick and more time is lost. At the end of the month there is little lumber and no money and they all wonder why saw milling does not pay.

I knew well enough that machinery was made to run, and when running it should be at work, and all I had to do was to keep the saw cutting for 10 hours a day and six days in the week. In order to do this the mill must be kept in good order, not by repairing broken parts but by keeping it from getting broken. And I soon saw that the parts of machinery out of sight were neglected the most. I would suppose any man would know that it is the inside of things that needs attention—the inside of the boiler, the inside of the cylinder, the inside of the pump or inspirator is of far more importance than the outside. Nothing makes me more angry than to see a man rubbing up the outside of his boiler when I know that the mud is six inches deep inside, baking, burning and blistering the iron; yet I have seen but few saw mills except my own. But I saw how that was managed before I took possession of it, and I am told that others are managed no better.

Many a man in the saw mill business would do well if he could get skilled labor, but this state is cursed with a tribe of saw mill tramps who claim to know everything and when tried can do nothing. They are always on foot and out of money, yet if we are to believe them they have been the superintendents of the largest mills in America. Everyone of them has been Gov. Drew's principal sawyer for at least ten years, receiving not less than $6 a day. They all know more of machinery than the men who make it, and are ready, not to commence sawing, but to commence cutting, changing, splicing and rebuilding with a promise that if I will give them $3.50 per day and board they will double the capacity of my mill and be ready for work in about three weeks. I have never been deceived by one of them, but they leave their mark wherever employed. One half of them ought to be hung and the other half sent to the penitentiary. One came to me a few days ago who was an exception, for, notwithstanding he was "the best sawyer in Florida," he was willing to work for $10 a month and board, or $12 if he boarded "his self"—hungry looking wretch! I wouldn't have boarded him even a day for $2, and I knew he couldn't board himself at any such price. Said I, "Do you see that road out there?" He very meekly said he did. "Then," said I, "you go out there, and when you get to it you take either end you like; the one that will put you out of my sight the quickest will suit me the best." He went. If he had not I would have put the dogs after him in three minutes.

I employ none but the best hands—not paying too much or too little, for one fault is about as bad as the other.

I can't say just what my lumber costs me, but I know that when sold I have taken in more money than I have paid out. I am 53 years old, or about that, was born in Florida, and was raised at a time when bookkeeping was not thought of.

I now have my second husband, and I am the mother of nine children, seven of whom are now living. Several of the elder are doing business for themselves, yet they always come to "mother" for advice, and when they don't take it they wish they had. I have always managed my own business, and I expect to while I live. I awake in the morning and plan the day's work while the men are asleep, and at the breakfast table I give every one his orders, including my husband, who never objects to my doing the thinking for the family.

My first advice to men who contemplate going into the saw mill business is—don't do it, for not one in twenty of you has the ability to succeed. If, however, you are determined to try it, be careful that you get the best machinery, strong and heavy enough to stand the bad treatment of awkward hands. Buy the most durable belts, no matter what they cost, for half the failures in our backwoods mills are caused by constant breaking of belts. And when a complete outfit is secured, locate where you can get timber and sell lumber. Keep your machines in good order, taking special care of all parts out of sight. Pay your hands in cash, and not in promises, for they work for the money, and not for any love they have for you or your business. When you can't pay, shut down, stack your lumber and discharge all hands. Your mill will neither eat, drink nor wear anything while standing still. But when you do run work everything to its full capacity.

HARRIET SMITH.

BANGOR BUSINESS.

The *Mining and Industrial Journal*, under date of November 13th, gives the following review of the lumber trade of Bangor, Me.: "There is no change in lumber prices or freight rates to mention, and the only change will probably be an advance in rates on the last few cargoes that leave port. Considerable lumber will be shipped from Bucksport this winter by Bangor dealers. Nearly all the mill men closed the sawing season Wednesday of this week, although some steam mills, the Dirigo, for instance, will saw up to the close of navigation. Transactions in logs are about over for the season, and owners have been, and are, busy getting their stock into suitable winter quarters Many millions of logs are 'shingled up' along the river shores in coves, out of the way of damage by ice or ordinary freshets. There will be more manufactured lumber on hand at the close of the season than in 1883, but yet no great amount such as covered the wharves in certain former years. The log scale for the season was 101,000,000 feet, which pretty nearly represents the cut of last winter. This amount added to 40,000,000 feet of logs carried over from 1883 gives a total stock of 141,000,000 for 1884. It is estimated that there is now on the river 39,000,000 feet of logs, distributed principally among manufacturers, and to be carried over to next season, thus leaving 111,000,000 feet as the amount sawed. The amount of lumber produced was, of course, considerably more than this number of feet, being increased by the scoots."

A MOST EXTRAORDINARY CASE.

George Sabins, son of Eli M. Sabin, living in the township of Cramahe, was sawing in his father's mill on Nov. 14th, when an edging falling across the circular saw, was thrown with immense velocity, striking the young man in the inner part of the left eye, blinding the eye instantly, and displacing it forwards and outwards. Although bleeding profusely, he walked home, a distance of half a mile. A doctor was sent for and tended him up till Monday. The case not progressing satisfactorily, the father brought him to Port Hope to consult Dr. Hamilton. The doctor, after probing the wound an inch deep, discovered a foreign body—in the orbit of the eye—and advised an operation for its removal. This operation was performed at 12 o'clock Tuesday, by Dr. Hamilton, assisted by Dr. Corbett. After placing the patient under chloroform, and enlarging the external wound, what was the doctor's astonishment to find that on laying hold of the foreign body with a strong forcep, it was almost immovable, but on using vigorous fraction, inch aftar inch was drawn out, till a piece of pine wood two and three-quarter inches long, three fourths of an inch broad and half an inch thick was removed from the poor fellow's eye. And fancy this big piece of wood nearly four weeks in his eye, what intense suffering he must have experienced during these long weeks? We are glad to be able to state that the poor fellow is likely to make a speedy recovery, but with loss of sight of the left eye. This is certainly one of the most exttaordinary cases on record.—*Port Hope Guide.*

FORESTRY CONGRESS.

To the Editor of the Canada Lumberman.

DEAR SIR,—Inclosed please find $2.00, one years subscription to the CANADA LUMBERMAN. I was sorry to see the *Northwestern Lumberman* speak so hard of the Forestry Congress held at Saratoga Sept. last; liking the crowd to spring chickens, etc., etc.—and though not as well attended as it might have been, yet, there was a good deal of interesting discussion. Nor were all of those present extremists, arguing that our forests would be denuded of their wealth in a very few years.

Yours, &c.,

Montreal, Dec. 2nd, 1884. J. K. WARD.

DRYING AND PRESERVING WOOD.

I have read several articles in the lumber journals on the subject of drying or seasoning of lumber, which I think have not exhausted the subject, and if you would affor the space I would like to give my views based on facts, and an experience of over thirty years in the business. The drying of lumber is expelling the sap or fluids contained in it, and to treat it properly we must be informed of the quantity and nature of these fluids. One cord of wood (128 cubic feet) contains one hundred and eighty-five gallons of pyroligneous acid, or in one thousand feet of lumber 83⅓ cubic feet, one hundred and twenty gallons, the balance being substance. We must now consider the effect of the fluid upon the substance when left to act naturally.

The creator of all animal and vegetable bodies has decreed that when life ceases the body shall be destroyed, and has placed within each body the means for its destruction. The animal body is said to be composed of 50 per cent. of substance and 80 per cent. of corruption, which is the blood and fluids. During life these fluids are the life sustaining principle, but when life ceases they are instantly changed to a destroying power, and commence immediately their work of destruction. In the vegetable kingdom the same natural laws exist. The sap in the vegetable takes the place of the blood and fluids in the animal. During life it is the life-sustaining principle, and when life ceases decay begins.

The distillation of wood is carried on quite extensively in the United States and Canada. Professor J. A. Mathieu, of Detroit, Michigan, has erected a large number of retorts to be used for this purpose. The acetic vapor being condensed, the product is as before stated, 185 gallons of pyroligneous acid; from this is obtained mythlic alcohol, acetic acid and tar, and from acetic acid are obtained the acetates of lime, lead, copper, nickle, iron, manganese, etc. This shows the power of these acids on mineral substances. The following is given as the product of one cord of Georgia pitch pine: 15 gallons of turpentine, 80 gallons of pine oil, 150 gallons of pyroligneous acid, 45 pounds of vegetable asphaltum; and from yellow pine, two gallons wood alcohol, 12 gallons turpentine, and 160 gallons pyroligeneous acid. By the slow process of weather drying these acids are allowed to carry on their work of decay so long as moisture remains, and the fibre is eaten away and the wood rendered more porous and spongy, becoming weaker and more brittle. In order to preserve the wood in its most perfect condition and strength, we must extract the pyroligneous acid as soon as the tree is dead and cut into lumber. This may be done by heat in a properly constructed lumber dryer. One cubic inch of water makes one cubic foot of vapor or steam thus increasing its volume about 1,700 times. When the lumber is heated to 140° or 150° Fahr., the volume being so increased the vapor is rapidly forced out of the lumber to the surface. Now if a rapid current of dry, hot air is caused to pass through the interspaces of the pile of lumber to absorb and carry off the vapor as rapidly as it comes to the surface, the lumber will be thoroughly dried in six to eight days, and retain all its natural strength, and being entirely sound, will absorb far less moisture than when weather dried. The whiskey distillers say that a barrel made from green staves, kiln-dried, will absorb one gallon less of whisky than a barrel made from old weather dried staves. If the wood can be made incapable of absorbing moisture, it will not swell or shrink. I found in the manufacture of barrels from green staves, kiln dried, that breakage in bending in the truss was far less than in old weather dried staves. It is my conviction that green lumber quickly dried in a perfectly constructed lumber dryer, is stronger and much less capable of absorbing moisture, and consequently much less affected by the changes from damp to dry and dry to damp, and much more durable. There are two conditions in which it may be said that wood is imperishable. In drying of lumber we can only extract that part of the destroying element alluded to, which is susceptible of being vaporized, and there still remains an essential part of it, but in a dormant seate; deprived of power to act in the entire absence of moisture, and when kept in this state the wood will last for ages. Then add the moisture, and this dormant enemy awakes to activity and will soon accomplish its work of destruction. Here is one condition in which we may hold the destroyer powerless, not conquered.

There is another condition by which we can accomplish the same results, viz., by submerging. Timber submerged will last for ages; then it is not the water that destroys, but holds this element dormant by a superabundance of moisture. When brought to the surface and relieved of this superabundance of moisture, this element awakes and begins its work of destruction. To render wood imperishable in all conditions has long been the study of man, but up to the present time he has not been able to conquer and destroy this mysterious element.—*P. G. Finn in Lumber World.*

SALT AND SAW MILL WASTE.

There are doubtless many saw mill operators in the South, and on the Pacific coast, to whom saw mill waste is a nuisance, who are not acquainted with the part which this waste plays in the production of salt at several points in Michigan, notably in the Saginaw valley, where salt springs of great strength and purity occur adjacent to some of largest lumber industries in the country.

The principal item in the cost of manufacturing salt is the fuel required to evaporate the brine, which as pumped from depths of from 700 to 800 feet, and occasionally much deeper, usually contain about 95 per cent of a saturated solution of salt, and a certain amount of the water it contains must be expelled by heat before crystalization of the salt can take place. This operation is performed in the Saginaw valley in what appears at first to be a very crude and primitive method, but closer examination shows it to be the most effective which can be devised where artificial heat is used.

The salt solution, or brine, is pumped directly from the wells or springs into wooden tanks from which it is allowed to flow as required into shallow evaporating troughs of wood about 20 feet long, six feet wide, and 18 inches deep, each trough containing a series of galvanized iron steam pipes immersed in the salt solution from which the heat necessary for the evaporation is obtained. In large works a series of these evaporating pans are placed side by side in the same building and the steam coil carried through the whole series, the steam entering the coil in the first pan and the condensed water being discharged from the last.

Where the salt works are on a small scale the exhaust steam from the saw mill engine is sufficient to perform the work of evaporation, while in large works this supply is supplemented with live steam. In both cases, however, the steam used for evaporating the salt solution, as well as that required for power to drive the saw mill engine, is generated by the combustion of sawdust which is taken directly from the saws, usually by means of a conveyor chain and carried through a sheet-iron trough extending over the boiler furnaces, from which, through openings in the bottom, it drops between the boilers into the fires.

During the sawing season, steam is generated for both these purposes almost exclusively with sawdust, the remainder of the waste, consisting of slabs, edgings, etc., being piled in the vicinity and held in reserve to generate steam for evaporting the salt solution in the winter, when the mills are not running, and no sawdust is being produced.

By these means, nearly all the saw mill waste produced in the locality named above is very advantageously utilized, and the salt manufacturers, who are generally also saw mill operators, as has been seen, have an effectual method of "killing two birds with one stone," a method which gives them a decided economical advantage over their less fortunate brethren in other localities, who are obliged to purchase fuel to evaporate their brine.—*Northwestern Lumberman.*

A RAILROAD route is being staked out between Grand Rapids and Muskegon.

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Driving by Friction.

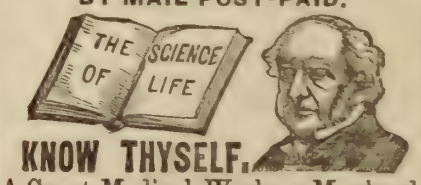
An objectionable method of employing friction driving is to use a metallic surface against a wooden or leather surface; two surfaces of wood are better; but if iron and wood are used together, the driver should, in all cases, be made of the softer material. For when the driver is throwh in contact with the driven, it must take a number of revolutions before its contact will be sufficient to start the driven wheel. It is evident, therefore, that if the driver is of iron while the driven is of some softer substance, it (the driver) will wear a crease that will injure the driven wheel. It is much better, where it is practicable, to make both the driving surfaces of wood.—*Scientific American.*

"No Physic, Sir, In Mine!"

A good story comes from a boys' boarding-school in Jersey. The diet was monotonous and constipating, and the learned Principal decided to introduce some old-style physic in the apple-sauce, and wait the happy results. One bright lad, the smartest in school, discovered the secret mine in his sauce, and pushing back his plate, shouted to the pedagogue, "No physic, sir, in mine. My dad told me to use nothin' but Dr. Pierce's Pleasant Purgative Pellets, and they are doing their duty like a charm!" They are anti-bilious and purely vegetable.

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There is no member of society to whom this book will not be useful, whether youth, parent, guardian, instructor or clergyman.—*Argonaut.*

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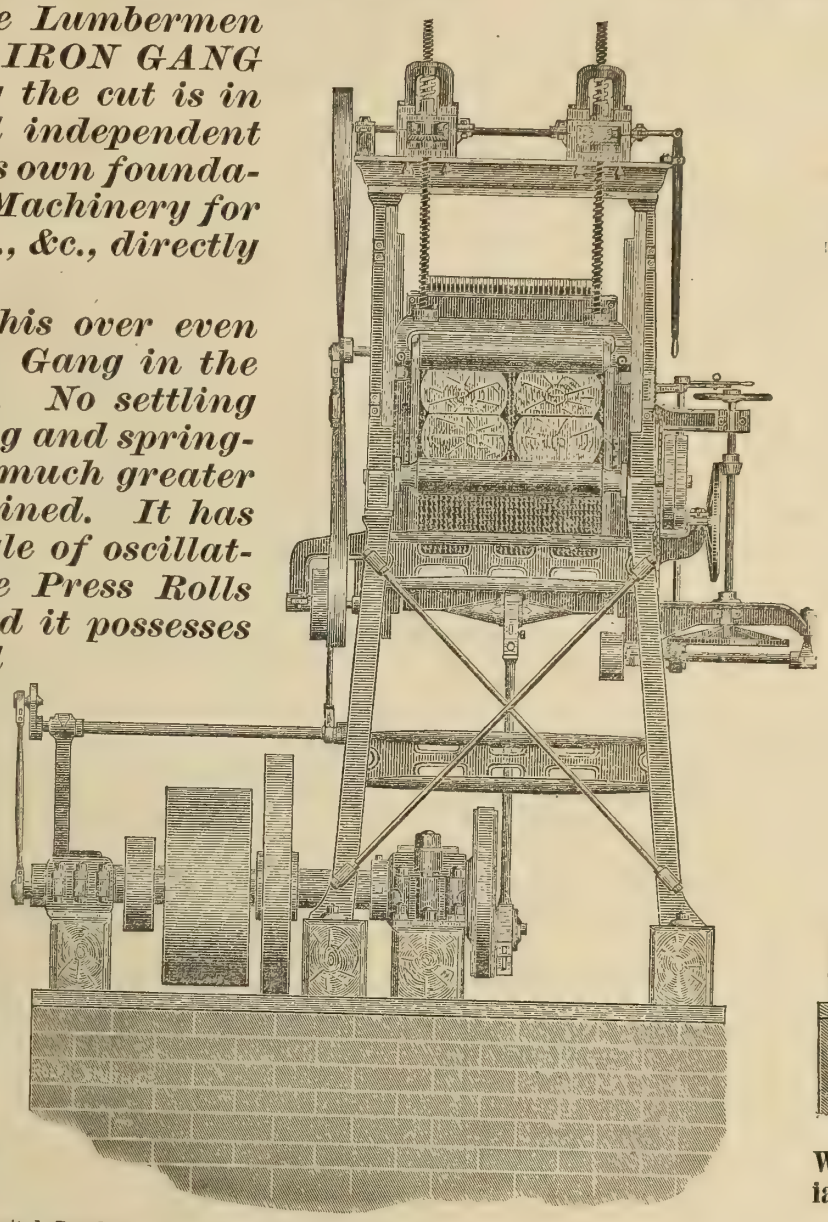
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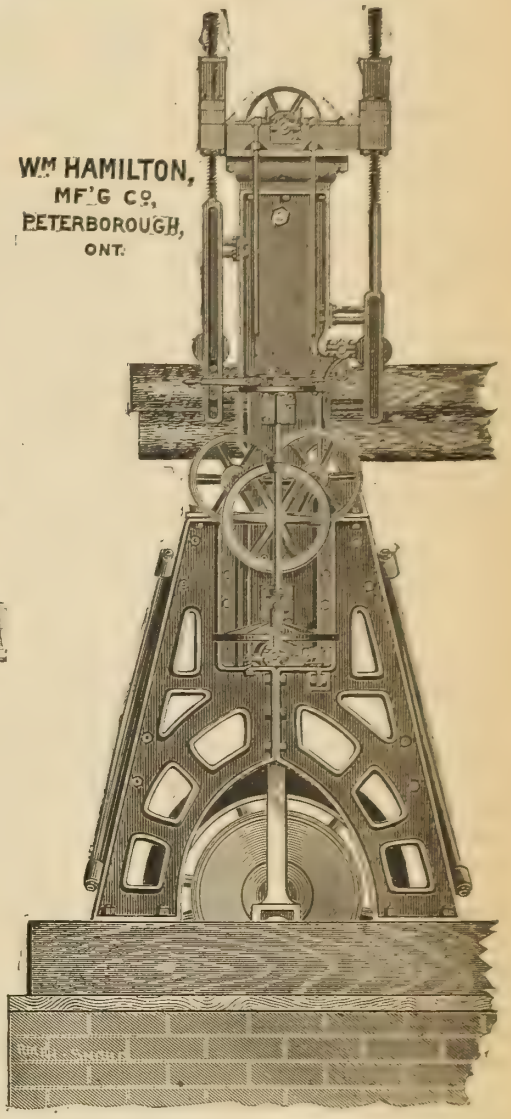
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The advantage of this over even a well built ordinary Gang in the mill frame is evident. No settling out of line, no yielding and springing of timber, while a much greater working speed is obtained. It has the most improved style of oscillating motion, it has the Press Rolls operated by power, and it possesses generally all the good features of best American Gangs, with heavier frame work, and heavier shafting, all with a view to rapid, steady & correct working. A good look at one of these massive machines satisfies the sawmill man that they are in every way capable of continuously performing heavy duty throughout the season.





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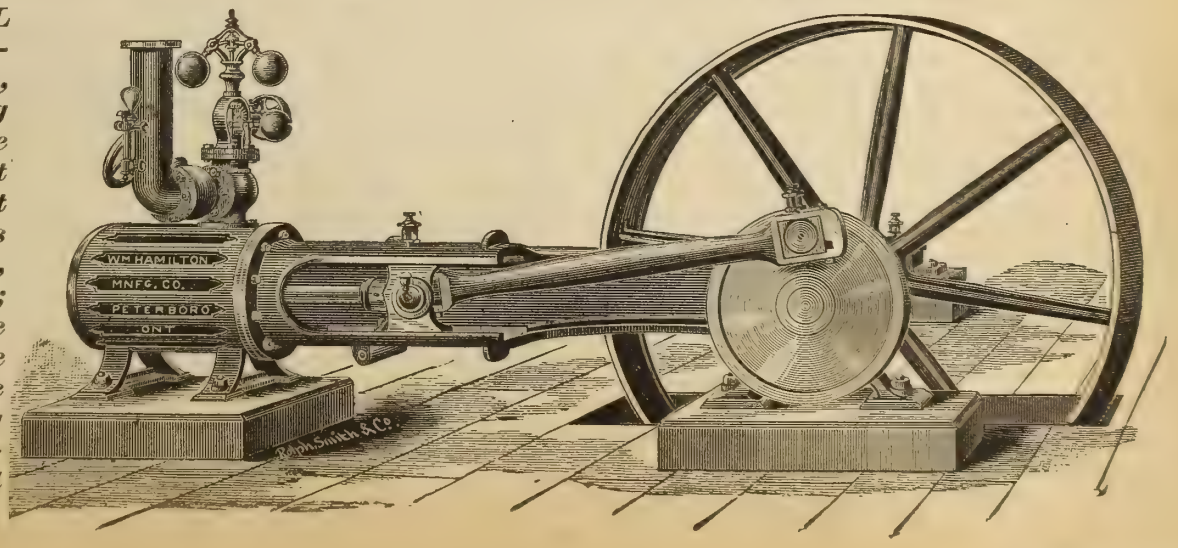
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SERPENT RIVER, September 28, 1884.

GENTS,—We are doing big work with the Mill. We recently cut 122 thousand feet of inch Lumber in one day, with the Gang and Large Circular, without any crowding whatever. We are making a steady average of from 90 to 100 thousandfeet per day. I cannot say what amount the Gang is really capable of cutting, as we have not yet been able to stock it to run it at its full capacity. I can, conscientiously recommend the Gang as the best built in Canada. I remain, yours truly, (Signed) WM. THOMPSON, Mill Manager for COOK BROS.

Also, ENGINES and BOILERS.

This cut represents our SAW MILL ENGINE, of which we make the following our Standard sizes, 12x16, 16x20, 18x24, 20x24, and 24x30, built Strong and Substantial for Heavy Work. The Piston Rod, Cross-head Pin, and Wrist Pin, are made heavy and of the best steel; the Connecting Rod has solid ends and is tightened up by screw and wedge, avoiding all danger of keys getting out; the Slide Valve has a simple balance valve, requiring no attention from the Engineer, as it is self-adjusting. The Engine Shaft and Fly Wheel made very heavy. Belt Pulleys put on when required in place of Fly Wheel, and all regulated by the Judson Governor.



MORE TIMBER IN ALASKA.

The San Francisco *Alta*, of a late date, contained the following: "Some time during last year the Corwin left this port, under instructions from the Government, with a number of presents for the natives on the Siberian coast, who had rendered assistance to the unfortunate Rodgers. Lieut. Stoney, who was one of the officers of the Corwin on this trip, in making explorations, discovered an unknown river which he named the Putman river. He explored it for about 40 miles, and upon his return to San Francisco reported his discovery to the navy department at Washington, upon which information the Ounalaska, which arrived at this port on Saturday last, was placed at his disposal, in order that a fuller exploration might be made. The Ounalaska sailed from the bay of San Francisco on Saturday, April 13, of this year, arriving at Hathaw Inlet July 10, and left there September 7 to ascend the Putnam. The banks of this river are heavily timbered with birch and pine. Two hundred miles up the Putnam the party found a beautiful valley, which contained timber and many wild flowers, similar to those grown in the United States, and at a distance of 400 miles the river took the shape of rapids, and small boats had to be used. At that distance wild strawberries and salmon berries were found. Indians inhabit the country thereabout, who are clean, intelligent, peaceable and honest. They use birch boats, and baskets to bail water, and are more advanced in civilization than those who live near the sea. At 300 miles up the Putnam good coal beds were found, and traces of gold. At a distance of 500 miles Lieut. Stoney found the source of his discovery in the form of a lake, as clear as crystal, far on top of a mountain. The natives in this portion of the country had never seen a white man before, and were much frightened, the women taking to the bushes at the sight of the explorers, and it was only through the medium of presents being thrown to them that they were induced to come near the boats. No accidents occured to the Ounalaska nor her occupants during the voyage, and the exception of a few heavy gales met with, the officers express themselves as having had a rather enjoyable trip."

HINTS FOR CLEANING BOILERS.

The Hartford Steam Boiler Inspection and Insurance Co., Hartford, Conn., in its monthly journal, *The Locomotive*, has the following to say concerning the cleaning of steam boilers: Following the application of any boiler-purger or other substance for loosening scale or deposit upon the shell, heads or flues of a steam boiler, special care and attention should be given to cleaning out the boiler with a prompt removal of such loose fragments as may have become detached and fallen down. These particles, if not removed, are often swept about by the various currents within the boiler, and collecting in a conglomerate mass upon some part of the fire surface, prevent access of water to that particular part, and thereby it is overheated and is bulged or bagged as it is sometimes called—often inflicting a dangerous injury to the boiler and requiring a considerable outlay for new sheets, a patch or perhaps other expensive repairs.

In the use of soda and other preparations used for the removal of boiler incrustations, that are soluable in water, a separate vessel may be provided suitably connected to the feed pipe, so that the preparation, in its proper proportions as recommended, may be first dissolved, and when properly prepared fed into the boiler. When there is a heater the solvent may be prepared and emptied into that. Logwood or oak chips, leather clippings and many other waste products of a manufacturing establishment that contain some useful ingredients as tanin, soda, or starch, may often be used advantageously when they are recommended and their use directed by an inspector, otherwise serious difficulties may result, perhaps endanger the safety of the boiler.

We should not have a great deal of sympathy for the man who, declining to avail himself of the services and advice of a physician, ruined himself by dosing with all sorts of nostrums of which he was ignorant, but such a man at the worst can but ruin himself; while another, who persists in dosing his boiler may not only lose his own life, but he may sacrifice many other lives in the same foolish way. We know of an instance in which a party who had some condemned bacon in his store house which he thought to use advantageously in cleaning and lubricating his boiler, he having somewhere read that grease was an excellent thing for the purpose. As he described it afterwards, the boiler nearly turned inside out, and he fondly hopes he may live long enough to get even with the man who recommended it to him. Another case was that of a fireman, whose duty it was, under the direction of the engineer, to fire and keep clean a battery of boilers, who, happening to hear some one of his mates say that oil was an excellent thing for softening scale, thought to make a trial of it on his own account. So, one Sunday when cleaning out his boiler he went through the shops connected with the establishment and gathered up the the refuse oil and grease from various drip pans, securing in this way two or three gallons, which he poured into one of the boilers and afterwards filled it with water. Soon after steam was got up the fire-sheets became bagged and beautifully corrugated and leaked like a sieve.

In boilers under our supervision we have used crude petroleum a great many times for the purpose of loosening lime-scale and with the most satisfactory results. We don't approve of the use of grease, and we deem the application of animal oils or fat to the interior of a boiler for that purpose as very hazardous. As a rule, when a boiler is in service, a systematic daily charge of a proper solvent graduated to the capacity of the boiler will be found more effacacious than a charge at longer intervals, and it is less likely to cause foaming and kindred difficulties. An important matter sometimes overlooked is the need of regular times for cleaning and the preparation which should be made for it.

When about to put a boiler out of service for a thorough cleaning it will be found an excellent plan to let the boiler cool off gradually and the pressure fall slowly until it has reached about five pounds, when the safty valve may be raised and the remainder blown off. Run off the water and relieve the hand hole when the scale will be found much softened and easily detached, while the deposit can be readily washed off with a hose.

Blowing down a boiler between the limits of high and low water, or in other words between the upper and lower guage-cocks is often very beneficial, and assists materially in freeing it from the ill-effects of scum and other impurities. If, however, this blowing down is not intelligently done there is a probability of great waste and serious loss. For, in blowing out good water at the temperature of the steam pressure, and replacing it by other water perhaps of no better quality at a much lower temperature of the feed there is a great loss of heat and consequent waste of fuel. Blowing down a boiler, can, however, under no circumstances be depended upon to thoroughly clean it and remove loose fragments of scale and much of the deposit commonly found. This can only be done by a systematic, periodical washing out at intervals to be determined by the circumstances of the case.

THE NEW "STAVE-SHEET" BARREL.

We paid a visit a short time since to 24, Botolph Lane, the temporary office of the patentees, to see a new method of barrel-making, and as we hear that a factory on the river-side is about to be started for the manufacture of the stave-sheet barrel, we now give some particulars respecting it.

The novelty of the invention, as the term "stave-sheet" implies, consists in making the body or cylinder of the barrel in a flat sheet, which is subsequently formed into a barrel by the aid of a simple and inexpensive apparatus worked by a manual power. The barrel in the flat sheet, of course, occupies very little room, and as the operations of jointing the ends of the stave sheet and fixing the heads are very quickly performed, it will be seen that this feature may be of great advantage to those who have to store any large quantity of empties, especially as the barrels are easily returned to the flat sheet after use, and consequently may always be stored in this manner. The most important element, however, in the invention is that it enables the production of a very cheap and merchantable-looking barrel, whilst, owing to the method employed in making the stave-sheet, various descriptions of barrels are obtained, meeting special trade requirements. The barrels are all cylindrical in shape, and of any size, and samples are shown with staves of from 3-16 in. to ¾ in. thick. Those with the stouter stave are iron hooped, and so as to facilitate the rolling, guiding, and up ending, they are provided with a broad wooden hoop around the centre, which appears effectually to produce the results obtained from the bouge of the ordinary barrel. This renders these barrels available for the carriage of heavy goods, such as cement, chemicals, fish, &c., as they are thus quite easy to handle.

There is one description of the stave-sheet barrel which we particularly noticed by reason of its essentially novel construction. It has the staves placed apart, and may be termed the crate-barrel. It is intended for the carriage of fish, game, fruit, vegetables, and other perishable articles, as when stowed it permits of a greater ventilation, than can be obtained with any square package. This barrel, like the others, may also be re-flattened at any time for convenience of storage as an "empty."

Although the samples made up to the present are intended for dry goods, still such close jointing is obtained that the barrels may be used to hold articles scarcely coming under that category, and it is consequently intended to make a trial stave-sheet cask to hold liquids. If this is accomplished, a surprisingly cheap wet cask will be obtained; but it remains to be seen if the saving in cost will to any great extent lead to the discarding of the old familiar bouge cask, though it is noticeable there is a very general tendency to diminish the bouge as much as possible, as by so doing a saving is effected, not only in material but in freightage. A special interest that this invention may have for the trade is that it is likely to create a new outlet for a large quantity of waste timber, a 2 in. stave being, if anything, preferred to a wider one. The invention has also received protection abroad.—*Timber Trades Journal.*

DELIVERY CARGOES.

At a meeting of the Liverpool Timber Trade Association, held at the Canada Dock, Liverpool, on Nov. 4th, a discussion arose upon the various wordings of wood charters, with special reference to the manner in which the cargo shall be delivered to and by the ship. The custom here has been based upon the procedure carried out under the old charters, made for the conveyance of Canadian or Colonial woods, whereby the cargo (with the exception of such hewn or sawn timber which can only be drawn from the port by horse-power) *shall be landed on the quay and there stacked at the expense of the ship.* This has been the established custom from the earliest times, but of recent years innovations have been made in this custom, not from within the trade here; but from charterers outside this port, hence when a vessel has arrived with a charter-party not in conformity with the Liverpool custom, disagreeable results follow as a matter of course.

It is needless to point out in detail instances of the manner in which these arise, but the decision at which the Committee has arrived will commend itself to all concerned, since its object is to put all charters upon a uniform and harmonious basis.

The following is an extract from a record of the proceedings:—

It having been brought before the notice of a Committee of this Association that there is a clause in some wood charters reading, "The cargo to be brought to and taken from alongside ship at charterers' risk and expense," or "The cargo to be brought to and taken from ship's board at charterers' risk and expense," which has given rise to misunderstandings and disputes resulting in some cases in litigation, it was resolved in order to prevent disputes the members of our trade be recommended not to adopt any form of charter-party containing either of the above clauses, but that instead the following be substituted, which has for many years been printed in charter-parties: "That the usual custom of the wood trade of each port be observed by each party when not otherwise specially expressed." It was further resolved that a copy of this resolution be sent to the timber merchants, brokers, shippers and others interested.—*Timber Trades Journal.*

INVENTION OF SAWS.

The saw was, it is said, invented by Dædalus, according to Pliny, but Apollodorus says the inventor was Telus. It is stated that the latter, having found the jawbone of a snake, employed to cut through a piece of wood, and then formed an instrument of iron like it. Beecher says saw mills were invented in the 17th century; but this is not so, it appears, for they were erected in Mederia in 1420, at Breslau in 1427. Norway had the first saw mill in 1530. The Bishop of Ely, ambassador from Mary of England to the Court of Rome, describes a saw mill there in 1565. In England, saw mills had at first the same fate with printing in Turkey, the crane in Strasbourg, etc.; the attempts to introduce them were voilently opposed, and one erected by a Dutchman in 1663 was forced to be abandoned.—*Engineer.*

TIMES IN THE STATES.

Since 1861, at the outbreak of the civil war, to the present time, twenty-three years, there have been but five really prosperous years as people generally regard years of prosperity, or, as they say, "good times." The other seventeen years have been characterized by dull markets, slow and unprofitable sales, liquidation, bankruptcy, unemployed labor, and distress. For about three years after the close of the war there was prosperity, high prices, and abundant employment; then came a decline that lasted several years, until 1873, when there was a collapse and seven long years of hard rubbing to get along, and much distress. It was the era of tramps, bread riots, strikes, and general disorder. In 1879 times began to be a little easier, and in 1880 there was a big crop, good prices, and a boom. It lasted two years, and then there was another decline, shrinkage of values, and distress. This year the pressure has been felt more seriously than since it first began in 1882. We call attention to the comparative fewness of prosperous years as a matter to cause surprise. Though only a little more than one one fifth of the time during the past twenty-three or twenty-four years has been what can be called prosperous, the country at large has prospered and progressed nevertheless. There is much humbug in a so-called boom. The prosperity that it represents is largely fictitious. If the civilized world could ever get down to an even gait in industry and trade it would be better. There is but one mitigation in a boom, and that is in the demand for labor which it creates. In a boom even tramps can find a job, if they choose. But the way our industries are now organized the first intimation of hard times is sure to throw thousands out of employment.—*Northwestern Lumberman.*

THE Wausau, Wis., mills, owned by nine companies and firms, will have cut at the close of this season 104,000,000 feet of lumber, of which 52,000,000 feet will be left over. The total number of men employed is 890. The boom received 113,000,000 feet of logs of which 104,000,000 were delivered.

POOR, despised hemlock is reciving more attention than ever before. Even in Wisconsin and Michigan men have held that none but a pine tree was of any value are now speaking in low tones about the future of hemlock. It will have a future, gentlemen, and the sooner you recognize it the better off you will be.—*Northwestern Lumberman.*

"It Knocks the Spots,"

and everything in the nature of eruptions, blotches, pimples, ulcers, scrofulous humors, and incipent consumption, which is nothing more or less than scrofula of the lungs, completely out of the system. It stimulates and invigorates the liver, tones up the stomach, regulates the bowels, purifies the blood, and builds up the weak places of the body. It is a purely vegetable compound, and will do more than is claimed for it. We refer to Dr Pierce's Golden Medical Discovery.

BULLETS AND DYNAMITE.

Mr. Hanson, of Hanson & Co., contractors agents, of Toronto, arrived last night from Gravenhurst and reports two very exciting incidents which occurred in that vicinity. The first was a shooting affray. On Tuesday night an Italian in the employ of Hendrie, Symms & Co., contractors for the construction of the Northern and Pacific Junction Railway, entered the office of Mr. James Hendrie at Gravenhurst to receive his pay. A dispute arose as to thirty cents and the Italian threw the money he had received down on the floor. While Mr. Hendrie was stooping down to pick it up the Italian drew a revolver and fired a shot at him which fortunately missed its mark. The bookkeeper of the firm, Mr. McKay, promptly grappled with the Italian, and the pair rolled out of the office and down the steps unto the sidewalk. After a desperate struggle the Italian got free and fired a shot at Mr. McKay, the bullet passing under his arm. Mr. Hendrie ran to Mr. McKay's assistance, when the revolver was discharged a third time, but without any more effect than the previous occasion. The blood-thirsty Italian, by the combined efforts of the two, was overpowered, and taken to the lock-up. During the night some of the Italian's friends attempted to effect a rescue. They obtained some dynamite and attempted to blow up one of the cells in order to effect an entrance. They were, however, unsuccessful. The Italian was taken to Barrie on Wednesday morning and was lodged in gaol to await his trial. He refused to give his name.—*Mail.*

A TALE OF MISFORTUNE.

QUEBEC, Nov. 30.—A family named Breton have just removed to Quebec in a very distressed condition, and under very painful circumstances. In the St. Lawrence, midway between L'Islet and Bay St. Paul, or at about seven miles from either shore, there is a small island known as L'Isle au Loup Marie, and owned by Toussaint, Ritchie & Co., its entire superficies being not more than a few acres. For three years this little spot of dry earth amid the waste of waters had been the home of the Breton family, who had not only cultivated it successfully, but had erected buildings on it and stocked it with a few domestic animals. In fact all went well with them until the night of the 5th of November, when the island was submerged by the stormy waves, and they not only spent a night of horror with two workmen in their employ, one of whom was nearly drowned and the other nearly died of fright, but they had the misfortune to see nearly all their possessions, buildings, crop and cattle, either destroyed or swept away. To cap the climax of their distress, the father of the family hurt himself while trying to save some of his stock. Finally, by means of signals of distress, they managed to attract the attention of some people on the shore of L'Islet, who gallantly put out and rescued them from their perilous situation.

DARING ESCAPE.

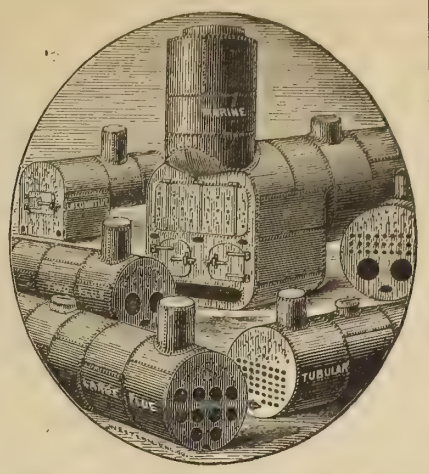
KINGSTON, Dec. 1.—William Johnston *alias* Jacobs, a seven years' convict in the penitentiary, placed a dummy in the bed in his cell yesterday afternoon, and by a series of fortunate circumstances escaped. He hid between two dead walls, climbed fifty feet to the roof, and with a bar broke through a wall of stone and cement and crawled up the rafters. Here he secured old overalls, and finding a lengthy piece of cord, knotttd it, tied one end to the ladder and threw the other through a ventilator and crawled out and finally descenced to the earth. He successfully avoided the guards in the yard, and by a ladder and a belt, secured his liberty over the walls. It is thought he left for the United States by the boat. Jacobs was an accomplished burglar, captured in Belleville a year ago. When arrested at that time it was at the top of a church spire, to which he had climbed.

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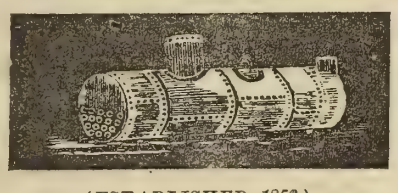
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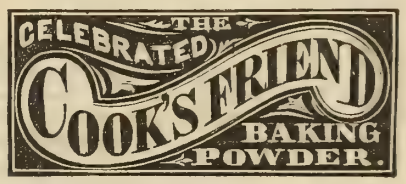
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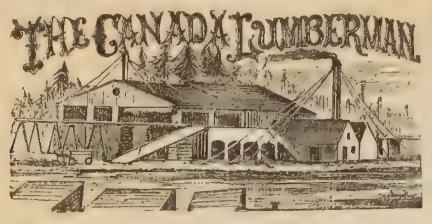
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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., DEC. 15, 1884.

E. R. PHINNEY intends this winter to build a steam salt block, to run in connection with his shingle mill at South Saginaw, Mich.

FIRES in the timber and lumber yards at Adelaide, Australia, early in November caused damage amounting to $500,000.

"To whirr is hew man," said the punster who felt of a buzz saw to see if it was in motion.

THERE is is said to be a poplar tree in Wright's valley, Va., which is 29 feet in circumference, and another into which a horseman can ride and turn around.

DEWING & SONS, Kalamazoo, Mich., December 3rd concluded the purchase of 3,100 acres of white pine stumpage in Jackson County, Tenn., estimated to contain 20,000,000 feet.

THE barque Alhama, bound from Mobile, Ala., to London with a cargo of 960,000 feet of yellow pine, was lost, the crew, however, being saved.

THE schooner Addie John, from Weymouth, N S., from Boston, put into Portland, Me., November 28th, in distress. She lost part of her deck load of lumber.

THE schooner Loyalist, from St. John, N. B., for Boston, with hemlock bark, went ashore near Head Harbor Island, Jonesport, Nov. 28th and went to pieces, making a total wreck. Crew saved.

THE Oscoda, Mich., Boom Company has about completed operations for this year, having rafted out 175,000,000 feet of logs, as compared with 213,000,000 last year, and 200,000,000, in 1882.

THE Ludington, Wells & Van Schaick Company has nine camps started in the Menominee region, and will start two more. The input his season was placed at 25,000,000, as compared to 56,000,000 feet last year.

HIBBARD, THURBER & Co., Pequaming, Mich., will furnish the New Orleans exposition a piece of pine strictly clear, cut at their mill, 16 feet long, 41 inches wide, and four inches thick, as an example of what Lake Superior pine is.

THE steamship Great Eastern sailed from England to New Orleans with a cargo of exhibits for the world's exposition in that city. The monster ship will remain moored opposite the exposition grounds during the continuance of the show, as one of its attractions.

IT is stated that Osterhout & Hugart, of Duluth, Minn., whose mill was burned recently, intend to rebuild on piles out in the bay, so that any fire in the mill will not be likely to reach the shore. The tramways will be so arranged as to be almoct instantly detachable.

THE Chippewa Logging Company and the Chippewa Lumber and Boom Company will expend from $60,000 to $70,000 this winter in repairing dams and works on the Chippewa river, which will do somethiug towards making good the lack of employment for working men in the woods.

IN the vicinity of Fife lake, Kalkaska and Grand Traverse counties, Mich., a larger number than usual of lumber camps have gone into the woods. As yet there are working short handed, but more will be put on the jobs later in the season. It is predicted that a large quantity of logs will be put in thereabout this season.

THE shingle shed belonging to J. H. Gibbs, near Edmore, Mich., together with its contents, was destroyed by fire November 26th. There were between 1,000,000 and 1,500,000 shingles in the shed burned, valued at $4,000. The origin of the fire was supposed to be incendiary.

THE cabin of the new steel steamer Nyack now built for the Lake Superior Transit Company, will be finished in cherry. The steamer will be 301 feet 6 inches long, of 38 feet beam, 3,000 tons burden, and will carry 200 passengers. It is expected that her speed will be greater than that of Jewett, now the fastest on the lakes, and that the new steamer will run 15 miles an hour.

THE OUTLOOK.

The outlook for lumber operations in New Brunswick during the coming winter is not very promising, though it has been perhaps quite as dark before, and will doubtless brighten again in the not very distant future. The already long continuance of the depression is, of itself, an evidence that the change for the better may be near at hand. * * * Reciprocal trade with the State would afford a great measure of relief if it could be secured, as we hope it yet may be. Meanwhile something more than has been yet accomplished might be done to turn to account the wealth of our hardwood forests. That our hardwoods are second to none in the world is established beyond question by the results of the by no means complete, though in many respects creditable display made at the Edinburgh Forestry Exhibition.—*St. John Telegram.*

A PROJECTED RAILWAY.

The Port Arthur *Sentinel*, in an article on a proposed new railway to be constructed within the municipalities of Port Arthur and Neebing and adjacent crown lands, at a cost of $1,296,000, refers to the district through which it would run, in which it says:—

"The region immediately along the proposed route of the line is fairly well timbered with occasional belts of white and red pine, interspersed with other descriptions of forest trees, chiefly spruce, tamarac, birch and cedar, all of a size suitable for railway structures and telegraph poles; while poplar of fine growth is invariably found in the elevated places. The entire section, however, to the right and left of the line, and, in fact, from Lake Superior to the Lake of the Woods, is estimated by the late Surveyor-General of the Dominion, and by our worthy member from Algoma, S. J. Dawson, Esq., to contain some twenty-six thousand millions of feet, board measure.

When it is remembered that this proposed colonization railroad will pass through the heart of the richest mineral region of the Dominion, that its route is surrounded by agricultural and timber lands of good value, and that it will form important connections with two leading transcontinental roads, little more need be said to justify the wisdom and great utility of the project."

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, Nov. 11, 1884, is specially reported to the CANADA LUMBERMAN by Franklyn H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., Washington, D. C.:—

307,739.—Boards, machine for matching—B. S. Atwood, South Abington, Mass.

307,795.—Flooring clamp—T. A. Perry, Plymouth, N. C.

307,901.—Lathe attachment—B. A. Barnes, Oelwein, Iowa.

308,037.—Saw handle clamp—A. McNiece, Newark, N. J.

307,927.—Weatherboard gage—W. D. Dyer and T. W. Maxey, Nevada, Mo.

307,934.—Log turner.—W. F. Fidler, Rock Cave, W. Va.

PATENTS ISSUED NOV. 25.

308,471.—Cant dog and pry combined—A. K. Doe, Stillwater, Minn.

308,472.—Cant dog, pry and pike combined—A. K. Doe, Stillwater, Minn.

308,347.—Lathe friction brake—U. & H. E. Eberhardt, Newark, N. J.

308,574.—Shingling gage—S. T. Poe, Covington, Ky.

308,549.—Saw—A. & C. W. Boynton, Battle Creek, Mich.

PATENTS ISSUED DEC. 2.

308,746. — Carpenters gage.—A. J. Burger, New London, Wis.

308,724.— Lathe mandrel—H. L. Stevens, Erie, Pa.

308,639.—Lathe attachment—A.G. Wiseman, Webster Groves, Mo.

308,801.—Planing and matching machine—J. A. Roberts, Detroit, Mich.

308,670.—Saw filing machine—W. Hill, Mount Vernon, Ill.

308,599.—Saw gummer—L. Fawcett, Cedar Lake, Mich.

308,703.—Saw handle, fret—C. Richardson, Newark, N. J.

308,701.— Wood steaming apparatus—L. Reed, Detroit, Mich.

NORTH SHORE LUMBER EXPORT.

A statement of the quantity of lumber shipped from Newcastle (Miramichi) to transatlantic ports during the season of 1884, is given to the *Advocate*. The quantities were 50,188,000 superficial feet deals, 5,431,000 sup. feet scantling and ends, 3,259,000 sup. feet battens, while of square timber there was exported 556 tons birch timber, 812 tons pine do. All this was carried in 115 vessels of 66,574 tons.

"The condition of the lumber business has been most unsatisfactory throughout the season, rendering necessary a curtailment in the exports—a precautionary measure which it is thought will have to be continued and made more general in its application before the much needed improvement can be expected on the other side of the Atlantic."

The exports of 1883 exceeded those of the season just ended by over twenty million sup. feet, and the number of vessels was 148.

The exports from Newcastle for the nine months ending September 30th are valued as follows:—

Produce of the fisheries	$ 25,753
Produce of the forest	583,029
Manufactures	142,560

The imports for the same period: Dutiable goods imported $36,650; entered for home consumption, $34,501. Free goods to the value of $2,047 were entered.

At the port of Dalhousie, the shipments were more nearly on a level with those of the previous year. The totals are as under: 1884, shipments, 18,235,140 sup. feet deals, etc., 2,953 tons birch timber, 1,476 tons pine timber, 411 tons spruce timber, 8 tons poplar, do., 8,006 pieces palings.

The shipments of 1883 were: 48,726,737 sup. feet deals, etc., 7,723 tons birch, pine, spruce and other varieties of timber, 8½ cords lathwood, 52,362 pieces palings. Last year 44 vessels of 26,847 tons were employed; this year, 43 vessels whose tonnage was 23,782. The principal shippers at the two ports were R. A. & J. Stewart, George MacLeod, D. & J. Ritchie & Co., Geo. Moffat & Co., Henry O'Leary, John McNair.

DEFORESTING.

The evils of entirely stripping our forests have been discussed again and again. Mr. S. W. Powell has published an article in the *Popular Science Monthly* on the subject, and as the subject is one of importance to this country, we take the following extract from it:—

"But there is further mischief, which, as being more widely diffused, is less sure to be assigned to the true cause—the stripping steep land of its covering of trees:

1. There is the failure of springs, because water of precipitation, which should have been delayed on the hillside by the roots, sprouts, mosses, fallen leaves, etc., which fill and cover the surface of the ground under a forest, till it could find the underground spring sources, runs off the bare slopes in a few hours. Dry springs mean parched pastures, small crops and unprofitable husbandry.

2 The increased cost of buildings, bridges, furniture, and implements of all sorts, which are, in whole or in part, made of wood. A large item in the current expenses of railroads is the outlay for ties, which must be renewed frequently. Wood for fuel or structural use is a prime necessity of civilized life; and, as it is bulky, its cost increases rapidly with the distance it must be carried to reach the consumer. Many countries have no stores of coal or peat, and must have wood, or be sorely stinted for fuel; that stinting is a waste of time, health, and vitality. Floods make the maintenance of roads difficult and costly, and so, of course, increases the expense of whatever must be hauled over them, especially anything so bulky as wood. Further, scarcity of timber means the cessation of many lucrative industries which use wood for their raw material, and which are especially desirable as affording employment during portions of the year, when agriculture or the care of flocks does not call for all of the farmers's time.

3. There is the derangement of climate and rainfall. It is by no means certain that, at least in some situations, more rain will not fall in a year upon a well-wooded than upon a bare region. Certainly, what does fall will not evaporate, and be carried away by the winds as quickly. Sudden changes of temperature and the resulting violent winds are also less liable to occur where woods abound. A forest is a better barrier against wind than a stone wall of equal height, because it divides its force, and does not stop it all at once, causing eddies and rebounds which may do damage elsewhere.

A MODEL MILL.

The Ottawa *Sun* of a recent date says:—The model mill of Canada, built on the Nation river for Messrs. Flatt & Bradley, timber merchants of Hamilton, is the source of attraction for the lumbermen of Quebec, as well as all over the Province of Ontario. It was visited yesterday by two prominent lumbermen of Montreal, and after inspecting the machinery, anxious to know her capacity, they requested Mr. Flatt, the senior partner of the firm, who happened to be there, to try her for one hour, which he did, and the result of which, to their astonishment, was equivalent to one hundred and ten thousand per day, which, they said, far surpassed any previous record for a single circular mill. This enterprising firm are to be highly complimented upon having thus reached the height of their ambition in this respect.

A MONUMENT is being erected by the Mohawks on the reserve at Deseronto to the memory of Chief Deserontyon, who landed there with the band just one hundred years ago. It will be about forty feet high and have 11x12 base.

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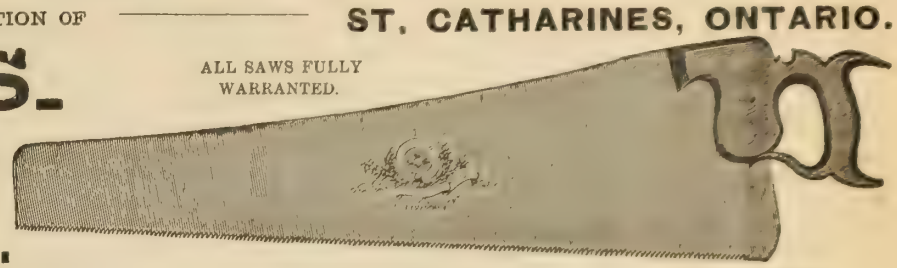
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CAUSE OF DECAY OF WOOD.

Professor P. H. Dudley, well known to railway and scientific men in connection with his discoveries made by aid of the dynagraph tar of his own invention, has been for some time investigating the cause of the rapid decay of wood. His methods of investigation have been mostly microscopic and chemical. Some time ago he discovered the fungi that caused the premature decay of most of the woods used in railroad structures, and followed their operations on the secular structure of the wood. By use of the photomicrograph views, he kept a graphic record of the appearance of decaying wood tissue. After patient search Mr. Dudley has discovered the spore that acts as the seed of fungus, and he expects soon to find a means of destroying this seed before it produces growth. Some of the wood-preserving processes in use do not destroy the fungus spores, and they go on germinating their ruin-making fruit. Any sure means of arresting the premature decay of wood will prove exceedingly valuable to railroad companies, since bridges and ties often fail with half their natural age, and in failing often bring about disastrous consequences.

ALBERTA DISTRICT.

The following is an extract received by a resident of Peterborough from Calgary, N.W.T. :—

"It is a beautiful country round Calgary in the Bow River Valley. It is very hilly with swift and odd mountain streams ; there is beautiful natural grades on which they raise very fine cattle ranches ; the beef beats any meat I ever tasted. The cattle are left out on the hills all winter because the snow never lies deep on the ground, and is often swept clear away or melted by the warm Chinook wind from the Pacific, but they cannot raise wheat here on account of July frosts.

"Calgary is a lively, pretty and neat little town which will some day become a considerable city. There is plenty of good timber on the mountains which is floated down the Bow River.

"As I sit in the tent I enjoy a magnificent view of the Rocky Mountains. It is worth going a long way to see their immense blue masses capped with dazzling snow. Our work will lie principally among the foot hills of these grand old Rockies, to Fort Micheal and back to Calgary and so northeast to Edmonton.

Yours, &c.,
C. N. T."

CONTRADICTORY REPORTS.

The news received by telegraph from Egypt, if it cannot always be relied upon, has at least the value of variety. First we are told that Gen. Gordon has been killed, and, following this, reports come of his doings at Khartoum. Then, to give variety to the news, we are informed that the Mahdi has expired, and soon after we are informed of renewed activity among the rebels, and of active measures by the (supposed to be) dead False Prophet. But even that is not enough, and one despatch informs us that the Mahdi attempted to lead his followers across the Nile and that 3,000 were drowned, while at the same time the information is given that his followers are leaving him because he will do nothing. On the same day another despatch says that daily attacks are made upon Khartoum! People may complain a trifle of the unreliability of the despatches, but they cannot grumble for lack of variety, unless they claim that these contradictory reports are becoming monotonous.

Horses Drowned by Thieves.

WINDSOR, Dec. 9.—On Saturday night two horses were stolen from the stables of Daniel Marantette and Daniel Field, on the Grand Marais road, in Sandwich West. The horses were finally traced to the river near the ice-house, Sandwich. It is supposed that the thieves had a boat here and intended to take the horses across the river. A tremendous gale was blowing on Saturday, and the river was unusually rough. It is evident that the parties did not succeed in getting the animals across owing to this fact, for yesterday both animals were found drowned and washed up on the beach near the breakwater at the Sandwich fish hatchery, about a mile below the village. Both the horses' heads were tied together with halters which belonged to the stables from which the animals were taken. They also had bridles on which belonged to the stables. The animals were valued at $300.

Lynch Law.

MARYSVILLE, Mo., Dec. 9.—Chas. Stevens. a desperado known as "Omaha Charley," who killed Hubert Kramer on the 3rd inst., was this morning taken from the gaol by a mob of sixty masked men, who went to the gaol at two o'clock this morning, called up the sheriff and demanded that he deliver Stevens to them. The sheriff refused, and told the crowd he would fight to the last in defence of his prisoner. The mob then rushed for the door, and notwithstanding that the sheriff repeatedly fired into the crowd they forced an entrance, overpowered the sheriff, seized the murderer, and marched him under cover of a score of cocked revolvers to a railroad bridge, half a mile away, and hanged him. One of the mob was dangerously wounded by the sheriff.

Diphtheria in New York.

NEW YORK, Dec. 9.—Diphtheria, a scourge which never leaves this city, has taken a fresh start, and is raging fiercely. The habitual death rate of 50 per cent. of reported cases has been exceeded, and is at present 60 per cent. and over. Last week's deaths from diphtheria numbered 43 to 75 reported cases.

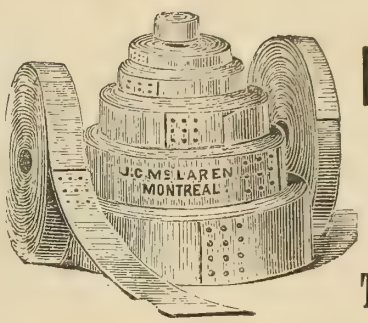
Broke Through the Ice.

ALMONTE, Dec. 11.—To-day, while one of our most prominent young men, Charles Shearn, jr., was attempting to cross the river on the ice he broke through, and before assistance reached him became chilled and went down. The body was recovered in a few moments, but life was extinct.

" Hello !" we heard one man say to another the other day. " I didn't know you at first, why! you look ten years younger than when I saw you last." " I feel ten years younger," was the reply " You know I used to be under the weather all the time and gave up expecting to be any better. The doctor said I had consumption. I was terribly weak, had night swets, coughs, no appetite and lost flesh. I saw Dr. Pierce's Golden Medical Discovery advertised, and thought it would do no harm if it did no good. It has cured me. I am a new man because I am a well one."

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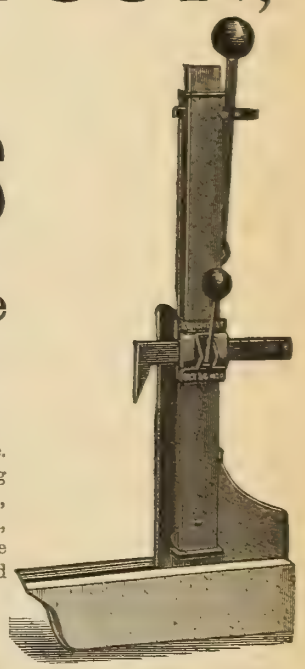
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THE LUMBER TRADE.

The Bobcaygeon *Independent* discourses thus on the subject of the lumber trade:

"There is at present a greatly reduced demand for forest produce, and the demand is not likely to increase either this season or next. The consequence will be prejudicial to the interests of our back country friends and to those lumbermen who are not in good pecuniary circumstances will be disastrous. The banks may prepare to lose heavily by the advances they have made to shaky lumbermen. Those engaged in lumbering who can struggle through the next two seasons successfully, will probably recover themselves speedily in the future, for the present stringency, curtailed production, and wiping out of the small lumbermen, will give those who pull through the hard times, a favorable chance of making profits. It must not be forgotten that no matter how hard the times a certain consumption of timber is absolutely essential. In hard times a man may put off repairing his house, or his picket fence, but decay goes on just the same, and when the year of hard times is passed he has two year's repairs to take in hand. In railway matters this is very clearly illustrated, for the repairs to a railway involve the consumption of immense quantities of timber, and if less is used this year, more must be used next year. It is the States that consume our forest produce, the Canadian consumption being but small as compared with the States consumption. If free trade existed between Canada and the States there would at once be an enormous leap in Canadian prosperity, for the whole of the fifty millions of Yankees would become purchasers of the Canadian forest produce."

HOW CIGAR BOXES ARE MADE.

Some of the machinery used by Messrs. William Beck & Co., in their Cigar Box Works on Albert street, is of a novel description, and the work done there appears little less than wonderful to the causual observer. Recently a *Free Press* representative visited the works and was shown through by Mr. A. Beck, one of the principals of the firm. Amongst the heavy machinery on the first floor was the planer, which Mr. Beck was just starting when the reporter arrived. A rough cross-grained board was put through and came out perfectly dressed, with a surface absolutely free from roughness of any kind, and ready to be made up into cigar boxes. This machine wastes very little or nothing of the board, as the knives are adjusted to cut a very thin shaving. It works rapidly, and is kept free from dust by an air blast, which carries all the refuse off through a pipe, by which it is deposited in a corner of the engine room and used to feed the furnace. The finest saw in Canada, erected at a cost of $800, has been placed in these works. It saws a perfectly even board any length required, and only the thirtieth part of an inch in thickness. Mr. W. Beck, who was operating the saw, showed what it could do by sawing off two strips of elm about ten feet long, not much thicker than a piece of ordinary pasteboard. They could be bent and twisted in almost any direction, or wrapped around a man's body like a sash. Mr. Beck explained that one great difficulty against which we had to contend formerly was that of obtaining thin lumber. They conld buy it in New York, but the cost of the raw material was higher, and then they had to pay a duty on the sawn boards as partly manufactured stuff. He could now turn out finer kinds of veneers, used by piano and organ makers, and expected to do quite a trade in this line.

The process of manufacturing the cigar boxes is carried on in three flats, and some very ingenious machines are used, including a nail driver operated by a boy which fastens the boxes together, driving three nails at once with greater precision than could be done by hand. The boxes are finished by girls, who line them and paste on the labels, etc., in a room by themselves. The factory employs twenty-six hands at present, and turns out a thousand cigar boxes per day, about 700 being required by the London cigar factories alone. For their own use they require 300,000 feet of lumber per week, while a firm in Hamilton are supplied with 150,000 feet, and a similar quantity is shipped to Toronto. The transformation wrought in the premises since these gentlemen have been in possession makes a very favorable impression on the visitor and speaks well for the energy and business capacity of the firm. Labor-saving appliances of the best kinds are provided, and sheds for storing and seasoning the lumber, drying kilns, tramways, etc., have all been constructed with a view to systematic and first-class work. Power is provided from a twenty-five-horse-power Corlis engine from the celebrated works of Cowan & Co., Galt. The title of the firm is "The Ontario Cigar Box Works and Thin Lumber Mills," William Beck & Co., proprietors.—*London Free Press.*

A NFW AND NOVEL IDEA.

There has been numerous devices in connection with lumbering, but the following method of logging as described by W. A. Campbell, of East Saginaw, is quite unique:

"There is one problem, however, that has but recently presented itself for solution. Heretofore lumbermen have found their pick of timber on high ground and on the banks of streams, but as this has been cut away, they have been driven back to more expensive cuttings. Then there comes the swamp lands; lands growing fine timber but utterly inaccessible with truks or sleds, and this growth must be left to itself unless some one contrives means other than those previously employed to get it out. It is stated that a demand produces a supply, and it is at this juncture that a most admirable contrivance is brought before the lumbering public. At the camp of Butters & Peters, near Ludington, there is an adaptation of the well known life line of the United States life-saving service, and one that is especially suitable for swamp work, particularly in the cypress swamps of the south.

A ordinary logging road is built to the edge of the swamp, and here a strong tree is chosen to which a heavy wire cable is attached. This is strerched about 25 or 30 feet from the ground out over the swamp for a distance of 400 or 500 feet, and fastened to another tree, both trees being well guyed to prevent them from breaking. Just at the side of the track there is placed a small but powerful hoisting engine, provided with three drums and suitable clutches for operating them. On this wire tramway, as it really is, there is a two-wheeled trolley, with an endless manilla rope attached, so that it may be drawn back and forth over the tight wire rope. The bottom of the trolley is further provided with a sheave and box carrying another rope, one end of which is connected with a drum, the other being spliced into an ordinary pair of skidding tongs. This rope with the skidding tongs is dragged into the swamp and fastened to the log to be taken out, the engine started and the log hauled until it is suspended in mid air directly under the trolley, which is then drawn onto the track and the log deposited upon the pile or loaded on the cars, as may be desired. The trolley is then run back and another log follows in the path oi the first. As to the details of the construction of this novel adaption little need be said here. The engine and boiler are placed upon a little car or truck that may be easily removed from the main track and run in any position that is desired, and its construction may be varied to suit the taste or necessities of the men who are to use it. The ropes are ordinary Manilla ropes, and the trolleys are of the simple and ordinary two wheeled type. It is only necessary to see this neat and simple contrivance at work to be convinced of its great usefulness for the purpose for which it was invented. Logs are snaked out of mud holes, ravines and gulches where no horse could ever be driven, raised into the air, run along through the woods at a good round rate and piled 20 feet high, with a rapidity and ease that would surprise any man accustomed only to the slower methods heretofore in use, for which ordinary working 30,000 feet have been taken from the woods where the trees were felled and loaded on the cars in the space of two hours, and with a service of only 13 men; and these same cars were unloaded at the rollway by a somewhat similar device in three minutes. And so strong and serviceable is the whole mechanism that with a single line of 500 feet in length at least 30 acres may be cleared by running the hoisting rope out on each side and beyond its limits, and when all the timber within its reach has been removed, the whole is taken down packed on a car and set up in another locality where the same process is repeated.

It is such improvements as this that will give our lumbermen their precedence, and unless some unlikely and disastrous legislation is effected so that our industries are crippled at a blow, we need have no fear but that means will be found to overcome all the difficulties that may be in the path that is to be followed and we will still continue to lead the world in the cheapness with which we do our work and the excellence of the article produced."—*Lumberman's Gazette.*

BUSINESS IMPROVING.

The sales of wool this week have been very large, amounting, during the five business days, to over four million pounds. Only twice previously this year have the sales been so large, and for the previous five weeks they have not amounted to half so much. The improvement, therefore, is marked. It shows that manufacturers need supplies, and, satisfied that present prices will be sustained in the future, have bought freely. The tone of the market has been much strengthened by this large business.

In other lines of trade there has also been an improvement. More movement has been reported in our market columns in leather, both sole and upper, with cautious buying by manufacturers; tanners have bought hides in large quantities the past ten days; cotton goods have been more active, and commission houses have made immense sales to jobbers; some advances in prices have been made in brown and bleached cottons; print cloths, from being a drug, have become active, and prices have advanced nearly a quarter of a cent a yard; cotton has advanced from 9¾ cents only a short time ago to 10 7-16 cents, and the export demand has been large. The export movement in bread stuffs and provisions has also greatly increased, and the freight room in steamers has been engaged ahead almost until next year. Packages of provisions in this vicinity have more orders from abroad than they can fill, and the daily receipt of cables is almost unprecedented. Even in what might be termed the small article of apples, the export movement is immense; the shipments last week were 59,389 barrels, making a total for the season thus far of 391,356 barrels. The mild weather has caused late building operations, with a larger employment of mechanics, and increased consumption of lumber. The "necessaries of life" are lower than a year ago, while wages have been but slightly reduced. There are now in Boston over fifty representatives of the boot and shoe jobbers in the different sections of the country, and they are placing orders with even more confidence than a week ago.

From all these indications, it appears that the business outlook is brightening, and it may be hoped that the improvement in trade, so long looked for, has at last begun.—*Boston Advertiser.*

WOOD TRADE STATISTICS.

The following is a list of the principal shippers of timber and lumber from Quebec to the European markets, together with the value of their respective exports during the season now closed: R. R. Dobell & Co., $2,625,000; J. Burstall & Co., $914,464; W. & J. Sharples, $621,978; Smith, Wade & Co., $473,520; Bryant, Powis & Bryant, $306,165; McArthur Bros., $289,673; Ross & Co., $125,000; Wilson & Co., $72,810; Henry Fry & Co., $63,422; J. Lyon & Son, $60,140; Price Bros, & Co., $40,000; D. D. Calvin & Co., $25,400; sundry, $75,000; making a total of $5,692,578. These shipments only embrace the exports from Quebec on which harbor dues have been paid. Some small quantities have been loaded at Cap Rouge and adjacent loading berths, but they have been insignificant.

The following is a statement of the lumber cut between Grenville and Ottawa for the season:—Hamilton Bros., Hawkesbury, 35,000,000 feet; W. C. Edwards & Co., Rockland, 40,000,000 feet; J. McLaren & Co., Buckingham, 17,000,000 feet; Ross Bros., Buckingham, 15,000,000 feet; Hillman's Mill, Rockcliffe, 3,500,000 feet; Gilmour & Co., Gatineau, 40,000,000 feet; J. McLaren & Co., Ottawa, 25,000,000 feet; W. McClymont & Co., New Edinburgh, 22,000,000 feet; Bronson & Weston, Ottawa, 60,000,000 feet; Perley & Patter, Ottawa, 50,000,000 feet; Sherman, Lord & Hurdman, Hull, 40,000,000 feet; J. R. Booth, Ottawa 60,000,000 feet; estate of Levi Young 18,000,000 feet; E. B. Eddy, Hull and Nepeau, 70,000,000 feet. Total, 495,500,000 feet.

USES OF YELLOW PINE.

In the Southern States yellow pine has been extensively used. All primitive constructions exhibit the wood, from fences up to residences, and it has entered largely into naval architecture. The keel, beams, side planks and decks of ships are often made of this wood. It has been shipped in large quantities to the ship yards of Maine for this purposes. The value of the tree in the construction of ships does not exist exclusively in the wood, as the tree supplies nearly all the resinous matter used in the United States in ship-building.

Large quantities of resin are also exported. Some portions of the forest have been impaired by tapping for resin. The best wood comes from the untapped trees, and timber merchants of New York pay especial attention to this matter; so that all timber or lumber from trees which have been impaired in that way cannot be rated as first class material. Very large quantities of pine have been consumed by railroads in the construction of buildings and cars.

The demand for yellow pine, both for domestic use and export, is rapidly on the increase, and it is not easy to foresee how great the future demands may be.—*Saw Mill Gazette.*

Timber Area.

In a recent address on the subject of tree culture, Prof. Rothrock, of the the University of Pennsylvania, points out that only 16½ per cent. of the area of the United States is woodland owned by private parties, whereas 28 per cent. of the area of Europe is in forest, and no European country with less than 15 per cent. of woodland area produces enough lumber for its own use. This estimate does not include the large tracts of public lands in our country which are of a forest character, but those are being rapidly denuded; and with their supply counted, it is plain to see that unless we soon take measures to preserve and increase our timber resources, we shall have to be sending abroad for lumber.—*Lumber Trade Journal.*

"As Good as New,"

are the words used by a lady, who was at one time given up by the most eminent physicians, and left to die. Reduced to a mere skeleton, pale and haggard, not able to leave her bed, from all these distressing diseases peculiar to suffering females, such as displacement, leucorrhœa, inflammation, etc., etc. She began taking Dr. Pierce's Favorite Prscription, and also using the local treatments recommended by him, and is now, she says, "as good as new." Price reduced to $1. By druggists.

Catarrh—A New Treatment.

Perhaps the most extraordinary success that has been achieved in modern science has been attained by the Dixon treatment for Catarrh. Out of 2,000 patients treated during the past six months, fully ninety per cent. have been cured of this stubborn malady. This is none the less startling when it is remembered that not five per cent. of the patients presenting themselves to the regular practitioner are benefited, while the patent medicines and other advertised cures never record a cure at all. Starting with the claim now generally believed by the most scientific men that the disease is due to the presence of living parasites in the tissues, Mr. Dixon at once adapted his cure to their extermination; this accomplished the Catarrh is practically cured, and the permanency is unquestioned, as cures effected by him four years ago are cures still. No one else has ever attempted to cure Catarrh in this manner, and no other treatment has ever cured Catarrh. The application of the remedy is simple and can be done at home, and the present season of the year is the most favorable for a speedy and permanent cure, the majority of cases being cured at one treatment. Sufferers should correspond with Messrs. A. H. DIXON & SON, 305 King street west, Toronto, Canada, and enclose a stamp for their treatise on Catarrh.—*Montreal Star.* ly122.

Chips.

B. L. SCOTT'S mill, at Bad Axe, Mich., was destroyed by fire. Loss, $3,000 to $4,000; no insurance.

C. WITHING & SONS consume 300 cords of birch wood yearly in their brush factory at Buckfield, Me.

HEMLOCK bark at Saginaw, Mich., has dropped in price from $8 a cord last year to $4.50 this season.

THE salt manufacturers of Saginaw valley consume from 12,000,000 to 15,000,000 of hoops annually, a large proportion of which are made in the valley towns.

I. A. HANK, the lumberman of Chase, Mich., is shipping maple logs in the rough to Glasgow, Scotland, to be used as rollers in the extensive paper mills of that city.

A FIRE in Paine & Co.'s lumber yard, at Northern Pacific Junctiou, 25 miles west of Duluth, Minn., November 8th, destroyed 9,000,000 feet of lumber. Loss, $75,000; insurance, $25,000.

THE sale of 3,000,000 feet of shipping box lumber in one lot, in the Albany, N. Y., market some time since, is said by the papers of that city to have increased the price $1 per thousand feet.

THE boiler of Noah Chrisher's barrel factory at Hudson, Mich., exploded Nov. 13. The boiler and engine were hurled into an adjoining dwelling and slightly injured a woman. Ben Chrisher was badly scalded.

THE boiler in Noah Chrisher's barrel factory at Hudson, Mich., exploded November 13, throwing itself and the engine across the street and into the side of a house. The engineer was slightly scalded.

THE route between St. Paul and Montreal by the Minneapolis, Sault Ste. Marie & Atlantic connecting with the Canadian Pacific at the Sault, will be 200 miles shorter than the present route by Chicago.

THE bark Saturnus, bound for Montevideo, with deals, has been frozen in at Grand Bay Saguenay. A tug made an unsuccessful at tempt to tow her out of the ice November 21st, and narrowly escaped being frozen in also.

EXTEMSIVE forest fires were prevailing in Mitchell county, N. C., about November 20th. Great quantities of timber and fencing were destroyed. A number of houses were swept away. No rain had fallen for many weeks.

A FIRE at Garfield, Saginaw county, Michigan, November 11th, destroyed a steam salt block and 2,530,000 feet of lumber, chiefly oak and ash, belonging to Mason, Allen & Co., and Joseph Barber. Loss, $33,000; insurance, $28,000.

COOK & HOWARD'S milling property, at Saginaw City, Mich., consisting of a shingle mill and salt block, was recently sold at auction to satisfy a mortgage. Frank Gansehow bid in the property, at $2,864.57, the amount secured by the mortgage.

THE steamer Ancon lately took to Alaska from Victoria, B. C., the machinery for a large saw mill to be erected by the Paris Lode Company, a gold mining concern. The mill plant will be an extensive one. The Paris Lode operations are on Douglas island.

THEBE are heavy stocks of lumber in nearly every market, says the *Northwestern Lumberman*, yet at nearly every point there is a scarcity of certain grades. This shows that as much of a study as the producers make of the requirements, their calculations have not become a science.

EIGHT dwellings have been contracted for by the Rainy Lake Lumber Company, at Rat Portage, Ont., to be built for the use of the company's employes. The company is about to build a planing mill on the north side of Laurenson's creek, at that place. The building will be 48x85 feet to be finished before spring.

WE learn, says the *Northwestern Lumberman*, that the "paper lumber" floor recently laid in a skating rink, in Indianapolis, Ind., proved unsatisfactory, and has been replaced with hardwood. Manufacturers of "paper lumber" and "straw lumber" have been very active in crowding their products into uses for which they are not at all adapted.

FOR SALE!

Steam Saw Mill,

complete with shingle and planing machines, all in first-class working order, will cut 50,000 feet a day. Engines are large and almost new. Will be sold cheap. For further particulars apply to

Colquhoun, Drummond & Co.

45 Common Street, MONTREAL,

Dealers in new and second-hand Boilers, Engines and machinery.

N. B—All boilers tested to full Government Test.

1yL16

Notice to Contractors.

SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Timber," will be received at this office until Monday, the 17th day of November, next, inclusively, for the supply of timber required in connection with the Dredging Plant of the Department, according to a specification to be seen at the Department of Public Works, Ottawa, where printed forms of tender may be seen

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied and signed with their actual signatures.

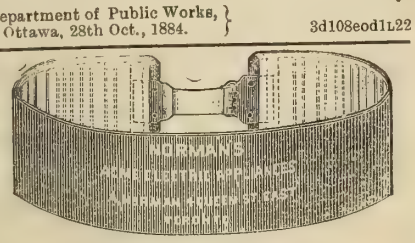
Each tender must be accompanied by an *accepted* bank cheque, made payable to the order of the Honorable the Minister of Public Works, for the sum of $150, (one hundred and-fifty dollars,) which will be forfeited if the party decline to enter into a contract when called upon to do so, or if he fail to complete the work contracted for. If the tender be not accepted the cheque will be returned.

The Department will not be bound to accept the lowest or any tender.

By order,
F. H. ENNIS,
Secretary.

Department of Public Works, Ottawa, 28th Oct., 1884.

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NORMAN'S

Electric Belt Institution,

(ESTABLISHED 1874),

4 QUEEN STREET EAST, TORONTO.

NERVOUS DEBILITY, Rheumatism, Lame Back, Neuralgia. Paralysis and all Liver and Chest Complaints immediately relieved and permanently cured by using these BELTS, BANDS, AND INSOLES.

Circulars and Consultation FREE.

A FEW SIMPLE TESTIMONIALS THAT SPEAK FOR THEMSELVES.

OTTAWA, September 3rd, 1883.

A NORMAN, ESQ.—Dear Sir,—I have experienced considerable benefit from your appliances. I feel stronger and better every day.

Yours truly, R. E. HALIBURTON.

PETERBOROUGH, October 15, 1883

A. NORMAN.—Dear Sir,—Soon after I commenced to use your Electric Appliances, they opened my bowels, cured my cough and cold, relieved my head and considerably relieved my catarrh in consequence. The discharge from my head and chest are now easy, and I feel altogether better. My digestion has improved, my stomach less sour and windy, and I am less troubled with lascivious and vivid dreams. I had previously tried almost all the advertised patent medicines without deriving any good.

Yours truly, J. GREEN.

CURATIVE BATHS, Electric, Vapor, Sulphur and hot and cold Bath4. Baths have been admitted in all ages by every school of medicine, to be one of the best means of curing ailments, maladies and diseases. The Electric Bath is the latest and best discovery in this line. Come and try them, at

4 Queen St, East Toronfo.

L14-1y A. NORMAN, Proprietor.

GOLD for the working class. Send 10 cent for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Augusta, Maine.

National Manufacturing Co.

160 Sparks Street,

OTTAWA, ONT.

STILL RETAINS THE LEAD

Have been awarded every Medal ever offered at Exhibitions in Canada for our Lines of Goods, notwitstanding the misleading advertisements of unscrupulous firms claiming awards, medals, &c., which they have never received. See letter from H. J. HILL, Esq., Secretary Toronto Industrial Exhibition Association, below. This year at Toronto, Montreal and Ottawa Exhibitions, we have been awarded

10—MEDALS—10

—FOR—

TENTS, MARQUEES,

And CAMP FURNITURE.



Lumbermen, Contractors and Surveyors

And other large buyers, offered Special Inducements.

New Illustrated and Descriptive Catalogue mailed on application.



OUR LINES OF

Tents, Flags, Tarpaulins and Camp Furniture, Shanty and Horse Blankets

Are without Doubt the BEST and CHEAPEST in the Market.

National Manufacturing Co. 160 Sparks St. Ottawa

P. O. BOX 345.

OFFICE OF THE INDUSTRIAL EXHIBITION ASSOCIATION,
TORONTO, MARCH 10, 1884.

The National Manufacturing Co'y, Ottawa:

GENTLEMEN,—In reply to your enquiry, I beg to say that the highest awards made at the Industrial Exhibition for the years 1881, 1882, and 1883, for Tents, Marquees and Flags, were to your Company, being a Silver Medal for each year. Last year, 1883, was the first in which a medal was specially offered for Camp Furniture and Equipages, and it was awarded to the National Manufacturing Co'y, of Ottawa.

I am, your respectfully,
H. J. HILL, Manager and Secretary.

6mL20

Market Reports.

TORONTO.

From Our Own Correspondent.

DEC. 9.—The retail trade is extremely quiet at present, and will no doubt remain so during the winte months, although the building season has been prolonged much later than could be reasonably expected. Bricklayers are still at work without seeming to feel the least inconvenience. After writing my last letter, in consequence of the mild, open weather, two more vessels cleared for Oswego, N. Y., with 750 M. feet of lumber, and with a good run down would manage to get there before their term of insurance expired.

The stocks on hand at the yards are fully up to those of last year, although it is difficult to furnish any large bills of dimension stuff. Nearly all mills are shut down and no snow as yet for log hauling, so that holders of small lots of scantling and joisting, more especially 18 feet and over, hold prices stiff, indeed most of the wholesalemen feel that there is no necessity for making any sacrifices. Both are also cleaned out from the mills and not more than 3,000,000 feet lies in stock here. Prices will likely advance 10 to 25 cents per M with the opening of the New Year. There has been considerable lumber coming in by the Canada Pacific R. R. from Ottawa and other points, and the officials connected with the road are so courteous and obliging that a good trade will undoubtedly be done over that line. The difference in treatment experienced by the lumber dealers at their hands as compared with the G. T. R. R. Co. is very marked, and much commented upon, and many dealers have expressed regret that they could not do all their business over the Canada Pacific road. Much dissatisfaction is expressed also by dealers at the charges made by the G. T. R. R. Co. as excess charges for overweights, and many have come to the conclusion that a car of dry lumber weighs as heavy as a car of green, judging by the charges lately enacted by that company. It is deemed strange, to say the least, that railway companies should choose the commencement of winter in which to weigh cars of lumber, when, as is often the case, ice and snow form fully one-third the entire weight of the load, and then to cap all this, the obnoxious charges levied for shunting cars westward to the city limits, entails a burden too grevious to be borne in silence.

In my next letter with which I close my years correspondence, I will endeavor to give you the returns of the entire year's receipts, as near at least as it is possible to get them. There is now so many points at which lumber is unloaded and shipped away, that it becomes more difficult yearly to collect with accuracy the quantities arriving here and also that shipped away, but I think I will be able to give it near enough for all practical purposes.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
Scantling and joist, up to 16 ft	13 50
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 00
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	20 00
" " " 32 ft	21 00
" " " 34 ft	22 50@22 50
" " " 36 ft	24 00
" " " 38 ft	27 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	24 00
" boards "	20 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 00
Three uppers, Am. inspection	35 00@40 00

B. M.

1½-inch flooring, dressed	30 00
1½ " " rough	16 00
1¼ " " dressed	25 00
1¼ " " undressed	15 00@15 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ₱ M	2 90
Sawn Lath	2 75

MONTREAL.

From Our Own Correspondent.

DEC. 9.—The season for the demand for lumber may be said to have closed till after the New Year, and merchants are engaged in taking stock and figuring up the result of the year's business, which, as far as building is concerned, is much below the preceding year. We hear it stated from many quarter that lumbering operations at the shanties will not be so large as last winter, as lumbermen are holding aloof until trade with the United States is in a more prosperous condition, and having the experience that for some years past there has been too much lumber manufactured in this country, which has kept prices down and left very little margin to the manufacturer. Prices are unchanged and the market closes easy at the following rates ex yard :

Pine, 1st quality, ₱ M	$35 00@40 00
P ne, 2nd " ₱ M	22 00@24 00
Pine, shipping culls, ₱ M	14 00@16 00
Pine, 4th quality deals, ₱ M	10 00@12 00
Pine, mill culls, ₱ M	7 00@ 9 00
Spruce, ₱ M	10 00@13 00
Hemlock, ₱ M	9 00@10 00
Ash, run of log culls out, ₱ M	15 00@18 00
Bass, " " ₱ M	15 00@20 00
Oak, ₱ M	40 00@50 00
Walnut ₱ M	60 00 100 00
Cherry, ₱ M	60 00@80 00
Butternut, ₱ M	25 00@40 00
Birch, ₱ M	20 00@25 00
Hard Maple, ₱ M	25 00@30 00
Lath, ₱ M	1 75@2 00
Shingles, 1st, ₱ M	3 00@ 0 00
Shingles, 2nd, ₱ M	2 50@ 0 00

SHIPMENTS.

In last report we gave a summary of the total shipments of lumber to South America with comparative figures for previous years, we are now enabled to give the total shipments to the United Kingdom with some comparative figures. We are indebted to Messrs. Anderson, McKenzie & Co., of this city, for the following figures : The total shipments of deals from Montreal to the United Kingdom during the season of 1884 were 191,226,212 Quebec standards, equal to 52,587,205 feet board measure, being an increase of 2,072,827 feet over 1883 ; 7,619,080 feet over 1882 ; 37,047,918 feet over 1881 ; and 32,802,320 feet over 1880. From Pierreville the present seasons shipments amounted to 3,932,202 feet an increase of 1,384,182 feet over 1883, and 1,738,367 feet over 1882. In the above shipments 153 vessels were employed, of which 138 were steamers and 15 sailing vessels. From this it is clearly seen how steadily and surely steamers are taking the place of sailing tonnage in the deal carrying trade, although to South America none of the former have as yet ventured from the St. Lawrence.

WINNIPEG.

The *Commercial* of Dec. 2nd says :—This trade is dead or asleep for the present, and need not be expected to awaken before spring. Nearly all manufacturers have sent their gangs of men out to the logging camps.

CHICAGO.

AT THE DOCKS.

The *Northwestern Lumberman* of Dec. 6th says :—The market season is over. On Wednesday there were no arrivals, and on Thursday the steam barge M. F. Butters put in an appearance with a cargo of timber specials that were to be delivered on order. Yet within the week ended to-day 80 loads of lumber have arrived in port, but only a small number have been offered on the market. During the closing days of last week the tale end of the season's shipments hustled in out of the winter that was hard after them, which swelled the fleet to considerable proportions. Offerings were worked off at about the previously prevailing figures. Piece stuff was sold at $8.50. A load of dry inch, of medium class, sold at $13.50. No. 2 stock changed hands at prices that had prevailed during the last half of November, namely from $9 to $11.

No vessels are now going out for lumber—or next to none—though the weather this week thus far has been fine for navigation. Everybody connected with the lake transportation of lumber appears to have abandoned the business for the season. The yard merchants are making little inquiry about stocks, so that there is nowhere any motive for a market.

On account of the limited number of offerings and sales on the market the past week, and the fact that there will be no further business of importance at the docks this year, we have dropped cargo quotations and the usual schedule of lake freights.

The commission men are getting their breath after the season's scramble, and appear to feel much relief. They seem to be satisfied with the amount of lumber handled, but complain somewhat of the prices realized. For four months the white wings of peace will hover over the rotting wharf at the market, the pop-corn man will be out of business, the market peeler will have an easy job, and these reports will be absent from our columns. In the meantime the autumn bulls will be developed into spring bears, and the commission men will be converting beefsteak into muscle and nerve that shall enable them to grapple with yard men in the spring.

AT THE YARDS.

Since the restoration of the 10-cent rate to southwestern Missouri river points, there has been a marked falling off in orders. Certain yards are still sending out occasional long trains —doubtless finishing up shipments on the 5-cent rate—but the majority of yards are having a quiet time. Dealers appear to have settled down to the conclusion that the demand throughout the winter until February is to be moderate. Conditions prevail which preclude the possibility of there being a brisk shipping demand for lumber during December, January and the first half of February. In any year this portion of the winter is characterized by a duller trade than any other part of the year. But to this consideratlon is now added the general depression in industries and business, and the low prices of farm products in the West.

The late settlement of the western passenger rate war will involve a re-adjustment of freight rates. It is announced that the re-adjustment of the lumber rates to Missouri river points has been postponed until December 17.

It is also stated that the trade of this city is to be discriminated against by eastern rates. The summer rates from Grand Rapids, Saginaw and Detroit to New York and Boston are to be retained while the winter rates from Chicago are to prevail. This would give the Michigan shippers a great advantage throughout the winter. A large amount of good lumber and common dressed strips go from this market eastward in the winter season. Any discrimination the railways may make against this city will excite great dissatisfaction among the dealers here.

Receipts of lumber, shingles, etc., from Jan. 1st to Dec. 4th as reported from the Lumberman's Exchange :—

RECEIPTS.

	Lumber.	*Shingles.*
1884	25,891,000	30,266,000
1883	27,474,000	22,853,000

FROM JANUARY 1, 1884, TO DEC. 4, 1884, INCLUSIVE.

RECEIPTS.

	Lumber.	*Shingles.*
1884	1,790,129,000	892,266,000
1883	1,867,741,000	1,128,613,000
Decrease	77,612,000	236,347,000

LAKE RECEIPTS FROM JAN. 1 TO DEC. 4.

Lumber	1,578,586,000
Shingles	807,385,000
Lath	66,071
Posts	2,612,096
Railroad ties	895,909
Wood, cords	25,115
Bark, cords	21,450
Slabs, cords	43,632
Telegraph poles	142,096
Piles	517
Spars	12

STOCK ON HAND NOV. 1.

	1884.	1883.	1882.
Lumber & timber	688,057,336	665,947,082	706,652,450
Shingles	321,961,925	389,972,515	278,178,150
Lath	70,742,042	83,359,413	63,527,227
Pickets	1,830,117	2,646,462	3,079,436
Cedar posts	400,805	781,571	150,835

FREIGHT RATES TO EASTERN POINTS.

In effect from Nov. 1st, 1884, to March 1st, 1885.

Chicago to—	
New York and common points, per 100 pounds	35c.
Albany	32c.
Boston and common points	40c.
Philadelphia	33c.
Baltimore	32c.
Washington	32c.
Buffalo and Pittsburgh	20c.
Erie, Pa	20c.
Dunkirk, N. Y	20c.

TONAWANDA.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@13 00

BOSTON.

The *Journal of Commerce* of Dec. 6th says : The open season so far has helped out some kinds of trade considerably, and there is a moderate call for the supply of current and near wants. Spruce is in rather improved demand, as many of the mills are shut down and the yards are stocking up for winter. Dry white pine of the better grades is quite firm and in pretty good demand. Yellow pine continues very quiet, even the call for flooring being cut into by maple and birch. For hardwoods there is a moderate inquiry, at about previous prices.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

ALBANY.

Quotations at the yards are as follows :—

Pine, clear, ₱ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	45 00@50 00
Pine, good box	22 00@32 00
Pine, common box	13 00@15 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 16@00 21
Pine, 10-in. boards, 16 ft., ₱ M	28 00@32 00
Pine, 12-in. boards, 16 ft	28 00@32 00
Pine, 12-in. boards, 13 ft	28 00@00 00
Pine, 1¼ in. siding, select	40 00@43 00
Pine, 1½-in. siding, common	20 00@00 00
Pine, 1-in. siding, select	42 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Black walnut, gook, ₱ M	100 00@120 00
Black waluut, ¾ inch	80 00@90 00
Black walnut, ⅞ inch	00 00@85 00
Scaymore, 1-inch	30 00@32 00
Scaymore, ¾-inch	23 00@25 00
White wood, 1-inch and thicker	38 00@43 00
White wood, ¾-inch	30 00@32 00
Ash, good, ₱ M	40 00@43 00
Ash, second quality, ₱ M	25 00@30 00
Cherry, good, ₱ M	60 00@65 00
Cherry, common, ₱ M	25 00@30 00
Oak, good, ₱ M	40 00@43 00
Oak, second quality, ₱ M	20 00@25 00
Basswood, ₱ M	25 00@30 00
Hickory, ₱ M	40 00@40 00
Maple, Canada, ₱ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ₱ M	38 00@40 00
Shingles, shaved, pine, ₱ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	4 50@ 4 50
" clear, "	0 00@ 3 00
" cedar, mixed	0 00@ 3 30
" cedar, XXX	0 00@ 2 00
" hemlock	0 00@ 2 00
Lath, hemlock, ₱ M	0 00@ 2 00
Lath, spruce, "	0 00@ 2 25

OSWEGO, N.Y.

From Our Own Correspondent

Three uppers	$42 00@46 00
Picking	32 00@35 00
Cutting up	22 00@25 00
Fine Common	20 00@22 00
Common	14 00@18 00
Culls	11 00@14 00
Mill run lots	16 00@22 00
Sidings, selected, 1 in	30 00@35 00
" 1½ in	32 00@36 00
Mill run, 1x10, 13 to 16 ft	16 00@21 00
Selected	21 00@24 00
Shippers	14 00@16 00
Mill run, 1½x10	17 00@20 00
Selected	21 00@30 00
Shippers	14 00@16 00
Mill run, 1 & 1½ in. strips	15 00@18 00
Selected	22 00@30 00
Culls	11 00@13 00
1x7 selected for clapboards	25 00@35 00
Shingles, XXX, 18 in. pine	4 00@ 4 55
Cedar	3 00@ 3 50
Lath, No 1	2 00@ 2 20
No 2	1 75@ 2 00

BUFFALO.

We quote cargo lots :—

Uppers	$45 00@46 00
Common	17 00@18 50
Culls	12 50@13 00

TYNE.

The *Timber Trades Journal* says :—The list of arrivals are this week very much in excess of any previous week for some time past. The overdue fleet will now all, or nearly all, have arrived, and what may now come to hand will be of very small extent and importance. The total amount of imports for the season, as will be seen on reference to the returns of last week are a very long way behind the corresponding period of last year, about 40,000 loads short. These figures, combined with the almost alarming amount of decrease in the returns of the North-Eastern Railway Company for the past ten months, are a fair evidence of the paralysis of trade in this district during 1884. So far there are little or no signs of improvement, although a better tone and prospect appear to animate most people engaged in the shipbuilding trade.

In housebuilding operations are over for the season, and a large number of hands are out of

work. The quantity of unemployed men on the river is very large, and although large amounts are being subscribed, and great efforts made to cope with the distress, the amount of poverty and consequent suffering, more especially among women and children, is still very great.

LONDON.

The *Timber Trades Journal* of Nov. 29th says:—There was a good muster of the trade in the saleroom on Wednesday, and the well-filled benches did not convey the impression that business was flat. Messrs. Churchill & Sim seem to retain the ability to bring big gatherings to their sales, and most of the representatives of those firms that make the public sales their chief medium of supply were present. That prices were any better than on previous occasions, it would be difficult to decide, but as far as we could discern from the result we should pronounce things about stationary.

The pine lots submitted ex Lillie Souillard undoubtedly sold well, not so much in respect to the broad stuff as with the oddments; these latter, 3x7 to 10, with a big proportion of the batten sizes at £21 to £22 5s. were not so very cheap to the purchaser. The broads naturally fetched the top figures, but £27 10s. for a little lot of 66 pieces was decidely cheap.

The scarcity of Quebec 1st bright boards ensures the few parcels that are now and again come in the sales plenty of competition, with a satisfactory result to the seller. In this instance, however, the price realized reads low, but we understand the goods did not represent the leading shipments.

AUSTRALIA.

Messrs. Lord & Hughes' monthly circular, dated at Melbourne on Oct 22nd. says:

Since our last on 20th ult., we have to report the usual public sales which have resulted in a small decline on Baltic flooring, while Baltic deals have maintained about the same rates as in our last advice.

In consequence of the demoralized state of the Adelaide market, nearly all cargoes destined for that port are being sent here for sale, and this has had an unfortunate effect on our market.

Oregon lumber has advanced, and the cargo of the Hesper sold yesterday at auction averaged about £7, the trade being bare of stock. The Republic has just arrived. American shelving and clear pine fully maintain late rates.

Trade from the yards continues active, and sales large, with no prospect at present of falling off, the demand for building being still as large as ever.

RED DEALS.—Imports: 1,271 standard from the Baltic, and 8,292 pieces. The arrivals have been—Glencairn, from Sundswall; Forto, from Gefle; Carl Pihl, from Christiansand; Adelaide, Claud Hamilton and Victorian, from Adelaide. On 10th inst. the cargo ex Forto was sold at auction, N A S, 11x4, realising 5⅜d., 11 x3, 5 13-16d. and 5⅜d.; 9x4, 5¼d., 9x3, 5⅛d. to 4⅞d. * * * 11x3, 3 13-16d. to 3½d., 9x3, 3⅞d. to 3⅜d.; and yesterday the cargo ex Glencairn was offered, when about 10,000 pieces were sold, S Crown B, 11x4, realizing 6 5-16d., 9x4, 5 5-16d. to 5 1-16d., 11x3, 5⅜d., 9x3, 5⅜d. to 5 1-16d., SAB, 9x4. 3¾d., 11x3, 4d., 9x3 4⅛d. to 3 1-16d. Other sales have been ex steamers from Adelaide, a great portion of which has been on account and risk of former purchasers.

SPRUCE DEALS.—Imports: Nil. There have been no sales by auction since our last report.

OREGON TIMBER.—Imports: 1,571,605 feet super. The arrivals have been Hesper and Republic, from Puget Sound. The cargo ex Hesper was sold by auction yesterday, at prices ranging from £7 7s. 6d. to £6 15s.

LUMBER.—Imports: Clear pine, 61,024 feet super; white pine shelving, 131,375 feet super; T. and G. ceiling, 27,754 feet super. These lines arrived per Oneida, from New York, and have not yet been advertised for sale. Public sales have been made ex Furness Abbey, Samar, and Ferdinand; shelving maintaining last month's rates, and clear pine showing an advance.

REDWOOD.—Imports: 100,000 feet super, This parcel arrived per steamer from Adelaide. There have been no sales at auction of this timber, which is but seldom inquired for.

FLOORING AND WEATHERBOARDS.—Imports: 2,682,774 feet lineal. The arrivals have been Magne, from Frederickstadt; A.T. Stallknecht, from Montrose; North American, Harbinger, Loch Rannock, and Loch Etive, from Great Britain; and Adelaide, from Adelaide. Sales by auction have been heavy and prices lower, being cargoes ex Bygdo, Lotos, Winefred, Stallknecht, portion ex City of Agra, balances ex Leviathan, Hertha, and Hans Gude, and small parcels ex North American, at following prices, viz.:—Red, 6x1⅛, 10s. 6d. to 9s.; 6x⅞, 7s. 9d. to 7s.; 6x¾, 5s. 3d. to 5s.; 6x½, 4s. 7d. to 4s.; 4-out weatherboards, 6s. to 5s. 6d. White, 6x1⅛, 8s. 3d. to 8s.; 6x⅞, 7s. 3d. to 7s.; 6x¾, 5s. 3d. to 5s.; 6x½, 4s. 5d. to 4s. 2d.; 4-out weatherboards, 5s. 9d. to 5s. 6d.

KAURI PINE.—Imports: 805,005 feet super. The arrivals have been—Nora and Grassmere, from Kaipara, and Laira, from Hokianga. Both these cargoes hace been sold by auction, in addition to that ex Sarah Ann, which arrived last month, hewn logs realizing 15s. 6d. to 14s. 3d.

CEDAR.—Imports: 189,332 feet super. The arrivals have been—May Newton, from Ballina, and usual coasting steamers. Sales have been made at auction in most cases almost as soon as landed.

DOORS.—Imports: Nil. The only sales by auction have been of 2 ft. 8 in. x 6 ft. 8 in., d. m., clear pine doors (Colonial), at 17s. 6d. each.

LATHS AND PICKETS.—Imports: Laths, 7,140 bundles; pickets, 5,716 bundles. A grert portion of these arrived to the order of the trade. Prices realized at auction show a decline on previous sales.

SLATES.—Imports: 281,991. The arrivals have been—Houghton Tower, from Liverpool; and Oneida, from New York. There have been no public transactions during the past four weeks.

PLASTER'—Imports: Nil. No business has been done at auction since our last advice.

CEMENT.—Imports: 4,840 barrels. Though a fair demand continues, yet, in consequence of continued heavy arrivals, along with full stocks at present held, there is no improvement to report, and sales cannot be made at last month's prices. Prices for best brands range from 13s. to 12s. 6d.

GALVANIZED IRON.—Imports: 1,197 tons. There is but little change to be noted since our last report. Prices range from £21 to £19 for best brands.

EXPLANATION.—Red deals and spruce deals are sold at per foot of 9x3; T. and G. flooring at per 100 feet running; Oregon timber, redwood, clear pine, shelving, ceiling, per 1,000 feet super; kauri pine and cedar logs at per 100 feet super; laths, pickets, and slates at per 1,000 pieces.

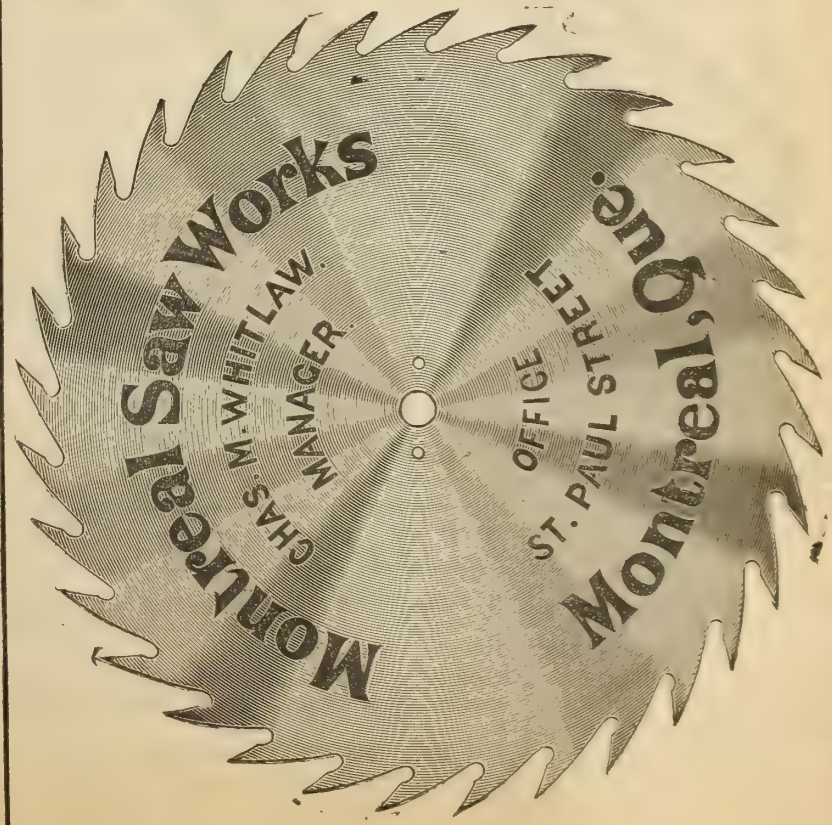
Death of a Lumber King.

The following despatch was received on Dec. 9th from Detroit:—Thompson Smith, owner of all the property at Duncan City, died to-day at Cheboygan. He was owner of immense tracts of land, much vessel property, some of the most extensive saw mills in the State, and was in fact one of the lumber kings of Michigan. He also had lumber yards at Albany, N. Y., and Toronto, Ont. His wealth is estimated between $3,000,000 and $4,000,000. He leaves a son and a daughter.

It's no nostrum. We speak of Dr. Pierce's Extract of Smart-Weed, composed of best French Brandy, Smart-Weed, Jamaica Ginger and Camphor Water. It cures cholera morbus, colic or cramps in the stomach, diarrhœa, dysentery or blood-flux, and breaks up colds, fevers and inflammatory attacks.

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At Ottawa Exhibition, 1884. It is the most economic and the best in use. Perfectly Pure. L20-1y

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RUBBER & LEATHER BELTING, SWAGES, SAW SETS.



Catalogues and Price Lists furnished on application.

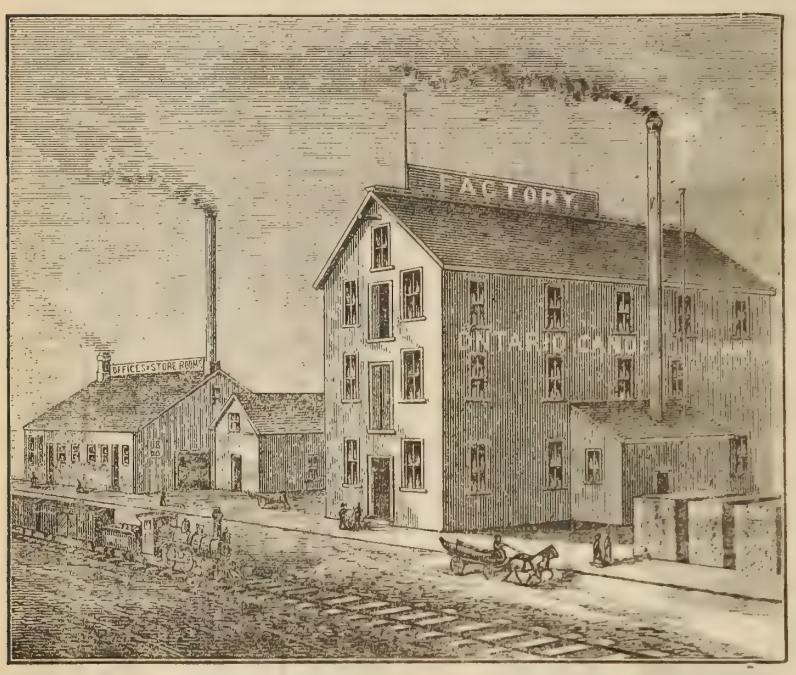
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Patnet Cedar Rib Canoes, Patent Longitudinal Rib Canoes, Basswood Canoes, Folding Canoes, Paddles, Oars, Tents, and all Canoe Fittings.



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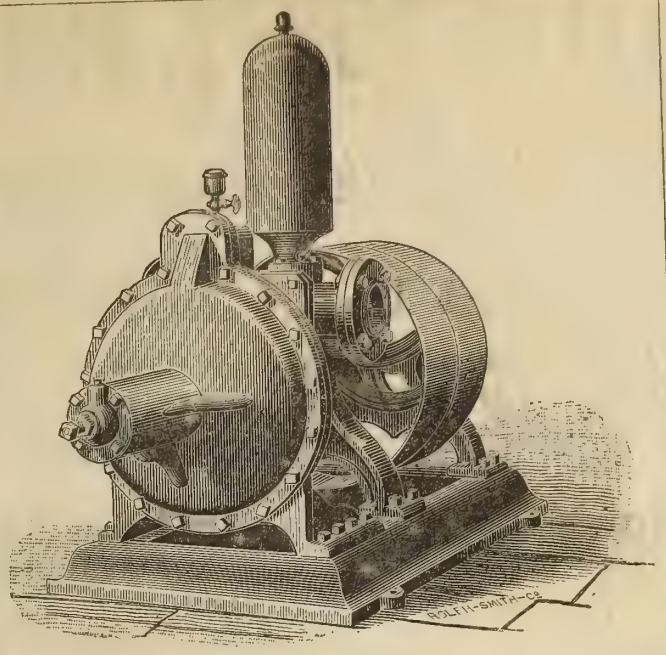
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An Improved Rotary Piston Force Pump.

No.	Diameter of Pipes.		No. of Revolutions.	Capacity per minute at table speed.	Price.
	Suction.	Discharge.			
2	2½ in.	2 inch.	250	125	$100
3	4 "	3 "	250	250	150
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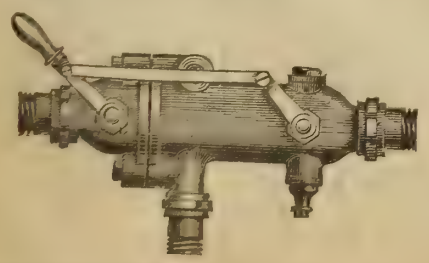
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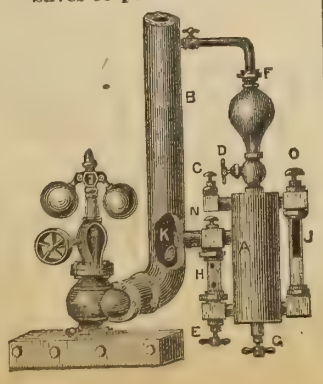
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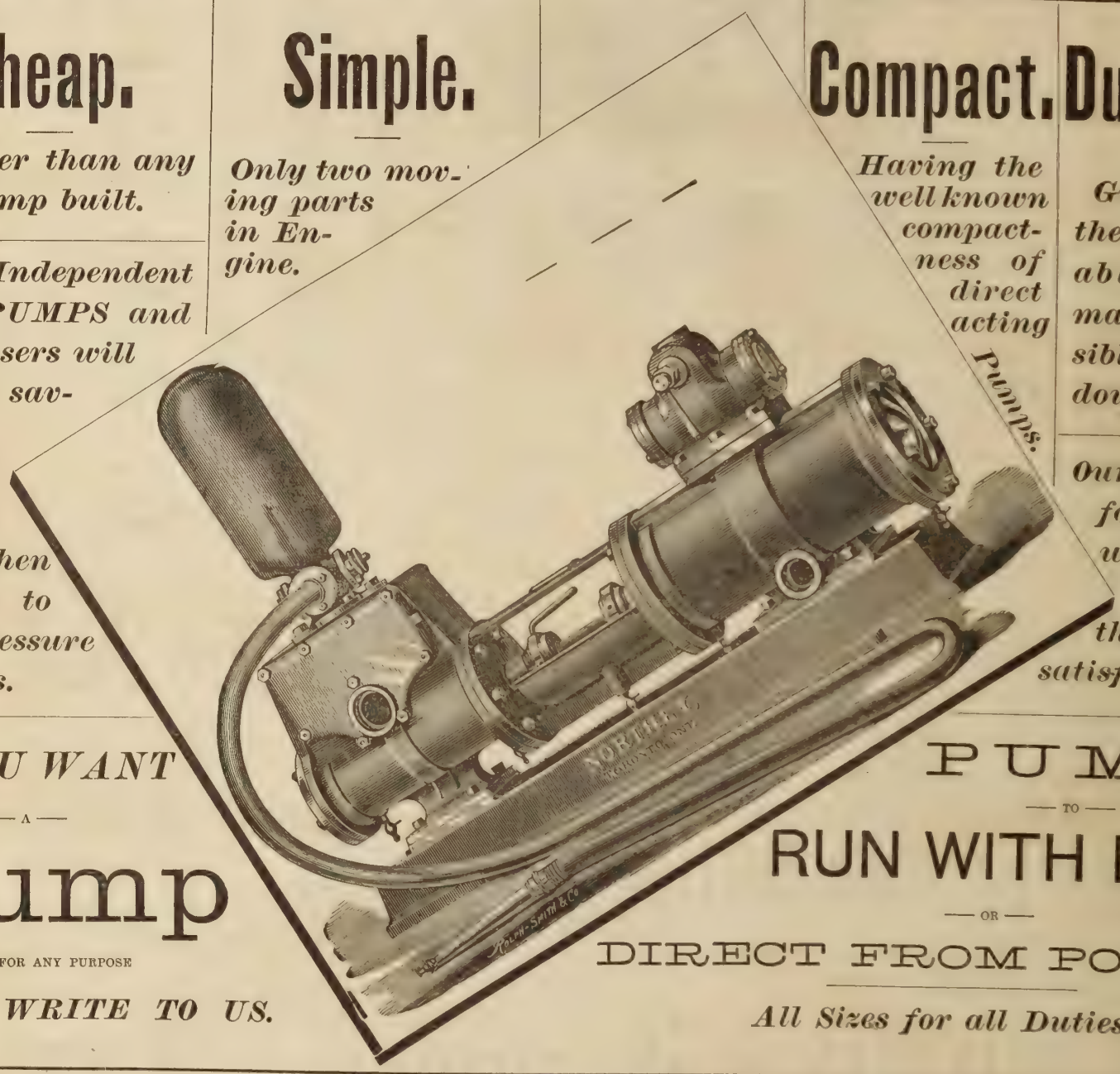
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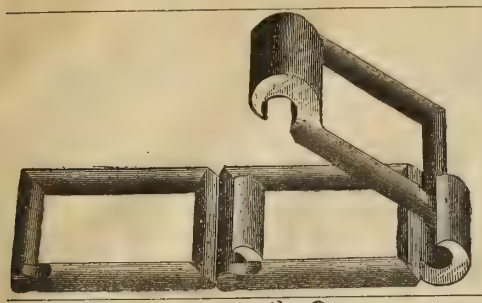
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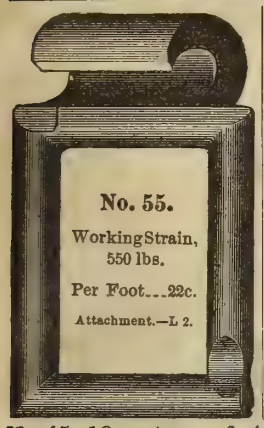
NORTHEY & COMPANY,

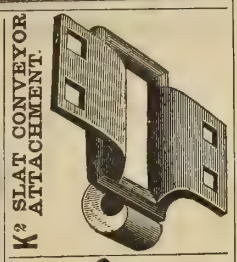
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For CONVEYING, ELEVATING, and TRANSFERRING every Product of a Saw Mill, into, through and out of the mill.





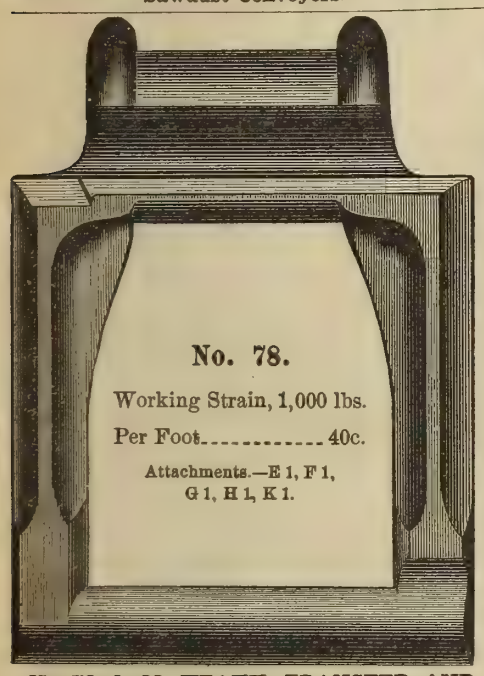


K² SLAT CONVEYOR ATTACHMENT.

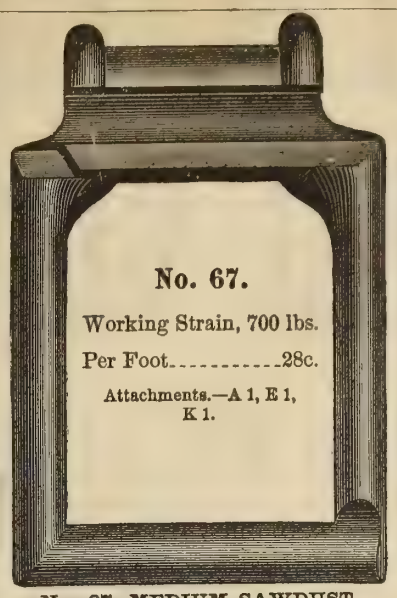


F² SLAT CONVEYOR ATTACHMENT.

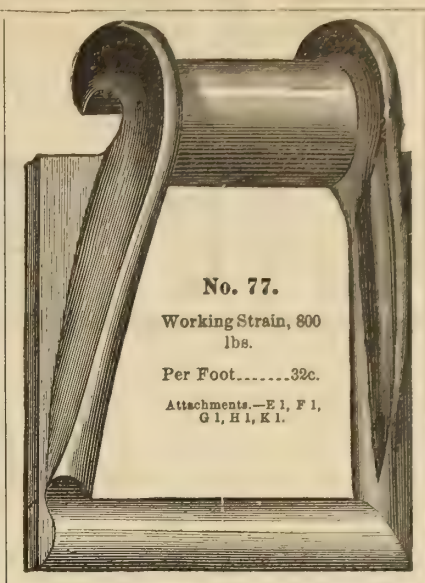
No. 45—16 cents per foot and 55 used for light Sawdust Conveyors.



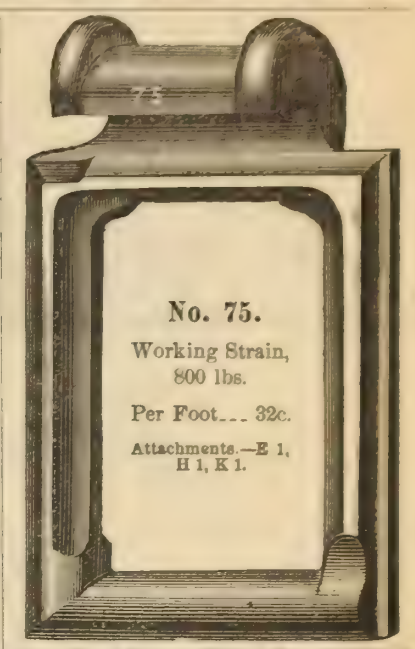
No. 78 & 88—HEAVY TRANSFER AND LIVE ROLL CHAIN.



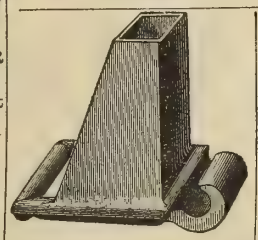
No. 67—MEDIUM SAWDUST CONVEYOR CHAIN.



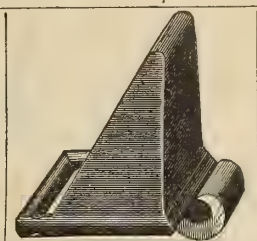
No. 77—CONVEYOR AND LIVE ROLL CHAIN.



No. 75—LIVE ROLL AND DOUBLE STRAND ELEVATORS.



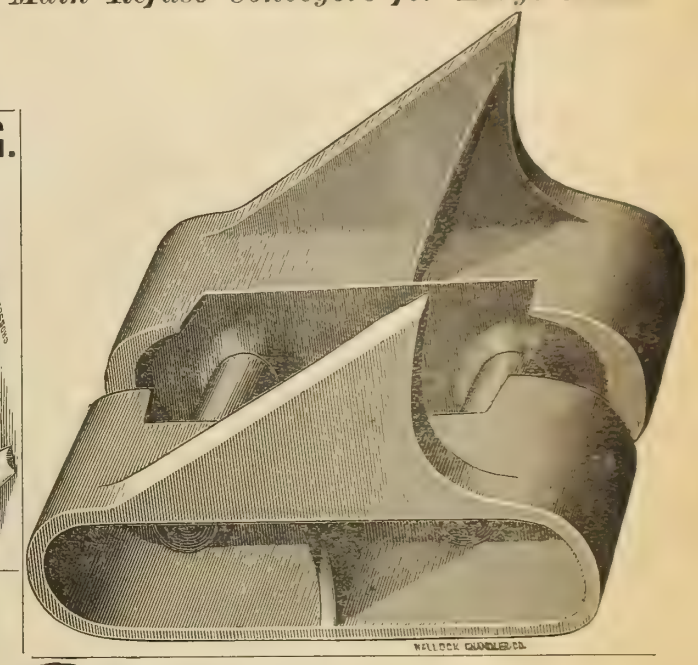
H¹ TRANSFER ATTACHMENT.



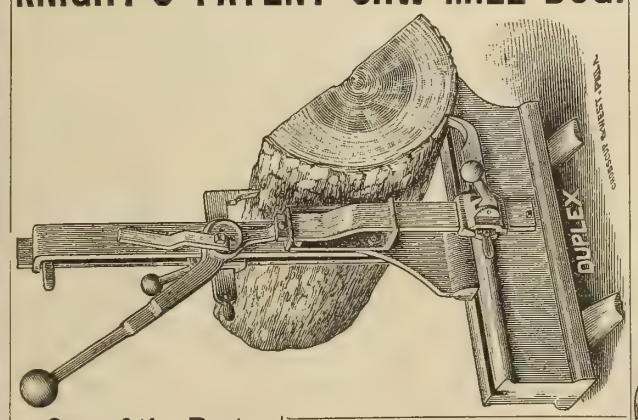
H⁴ TIE & POLE LOADING ATTACHMENT.

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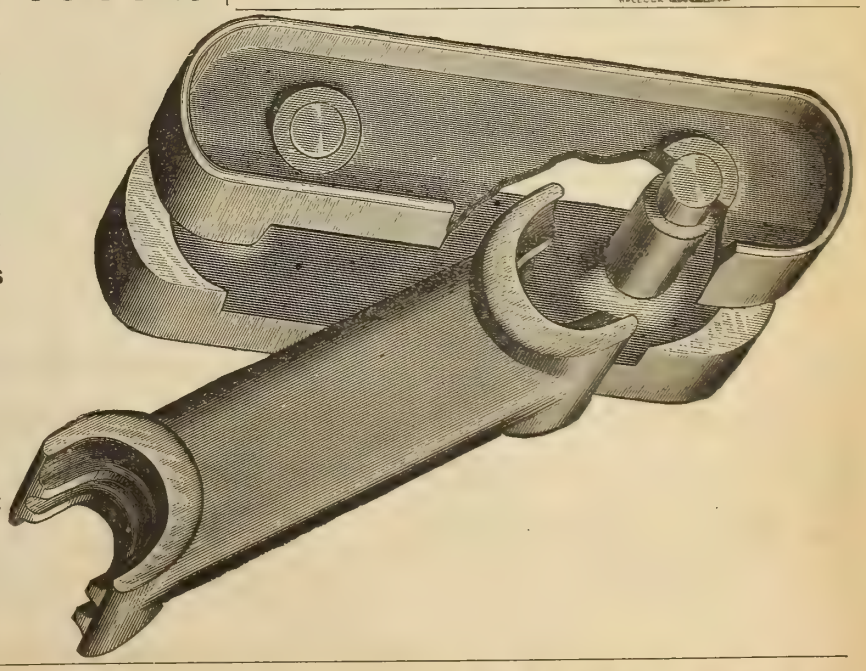
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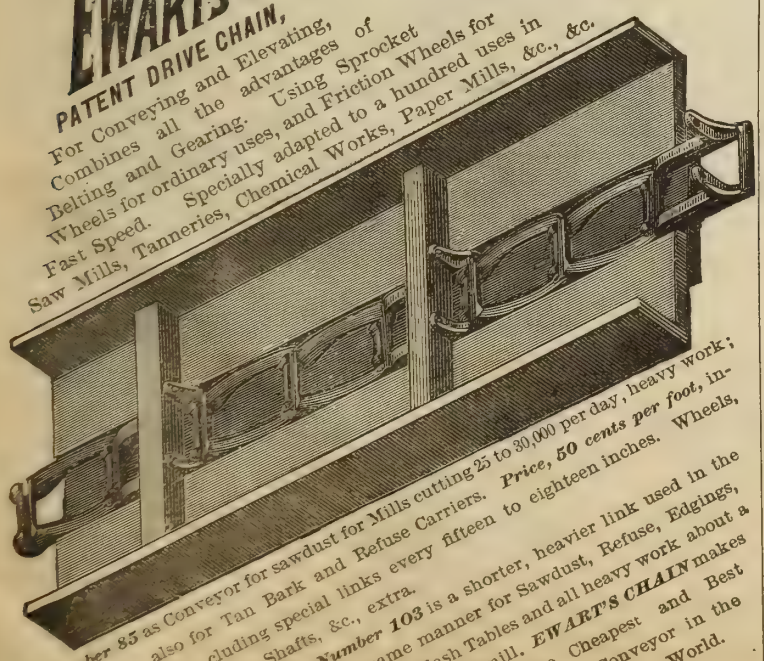
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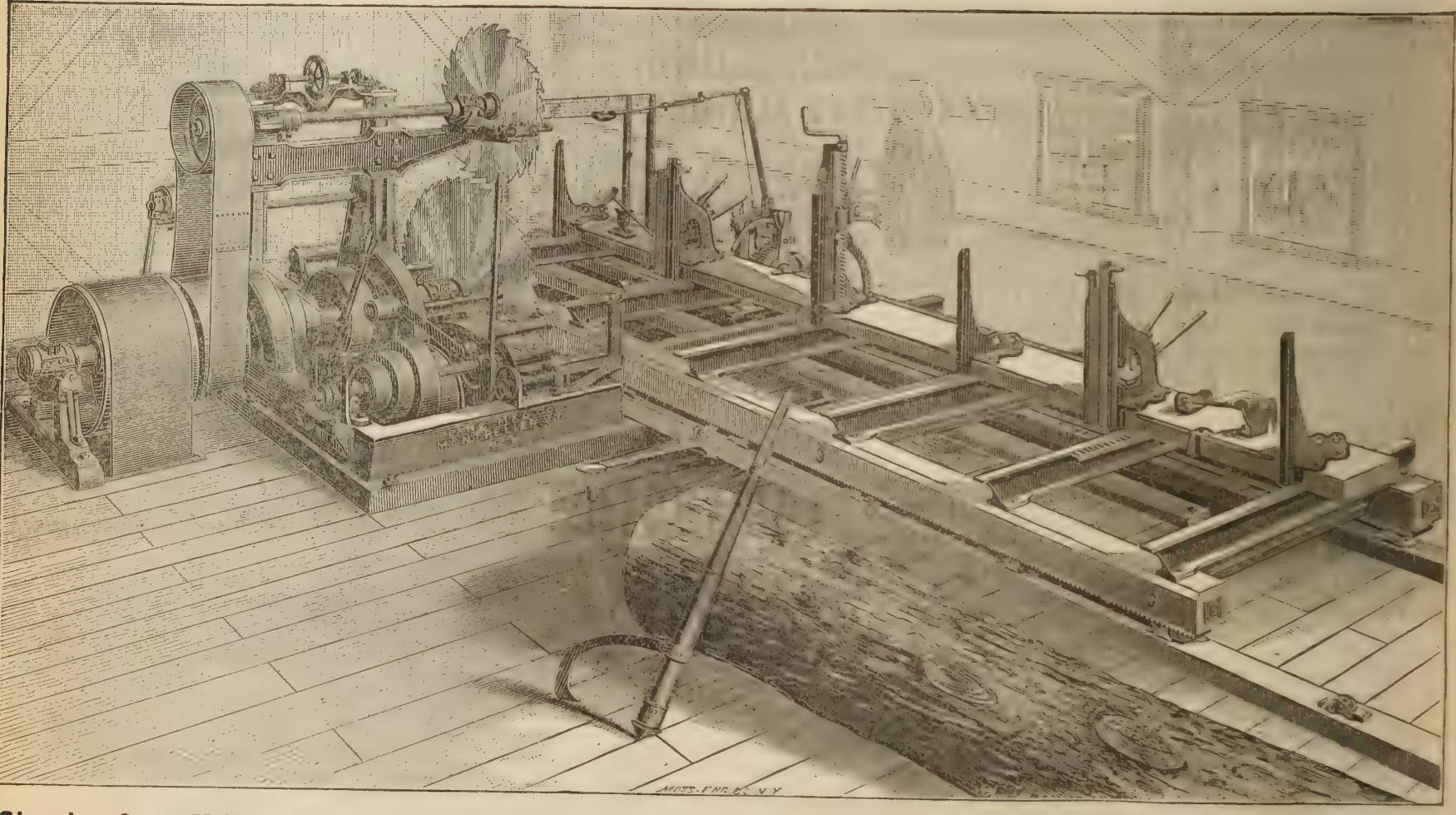
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